Landscape in Connection with Tree Planting, No. 3.

THE pictures of the landscape of a private dwelling are formed in the vicinity of the mansion, or with special reference to the views from its windows, balconies, or piazzas. In the execution of this, the most refined taste, united with a competent share of practical, botanical, and arboricultural knowledge, is necessary to success; the *painter's eye* should also have its influence. If water entered into the composition, it would be disposed in its natural place; the banks be as natural as possible, nor should too much of the water be exposed in one place, unless it could appear as a reach. Buildings should be only partially exposed, with the most characteristic angle jutting out from among trees, shrubs, and vines. Thus the hard lines in the dressed ground would be hidden, the asperities softened, and the exuberance of the imagination would have full play.

In planting a larger lawn or a park, and adjusting trees in them, the dressed ground should be linked easily and naturally with the scene, by placing groups of trees and bushes of the same relation or character as those of the kept ground, so as to appear parts of one mass or group; thus preventing a sudden break between the two scenes.

As there is a great diversity of character in places which are to be laid out, the improver ought to have a general stock of knowledge, to be drawn upon as opportunity offers; no rule can be applicable to all places, and it is impossible to lay down any code of laws by which a place can be properly improved without a tasteful direction. Perhaps, therefore, the best mode of conveying to the reader a knowledge of the principles and practice of this delightful art, is to first impress him with the beauty of single trees, their character of outline, leaf, and spray, and then to show him the principles of grouping as established by the concurrent taste of the painter and the improver.

From what has been said, it will be apparent that both the planting and thinning of ornamental trees require the attention of a skilful hand. The form and varieties of a group or groups, must be studied. When two only are planted, at least so close together as to intermingle their branches (Fig. 15), as before observed, the best effect is produced when they are placed as near to each other as, to all appearance, to form but one tree, as also seen in Fig. 6, in the February number, and the Beech (Fig. 18). In Fig. 13, the small Spruce Fir is highly injurious, but greatly improves Fig. 14. An Ash with a Scotch Fir, the Horse-chestnut with the Larch or Narrow Poplar (Fig. 16), would be as improper as the Round-headed Lime with the Spruce Fir (Fig. 13). The union of a spiral with a flame-shaped tree, as the Lombardy Poplar (Fig. 16), is out of keeping, compared with Fig. 17, when a greater breadth of Poplars is introduced, which may form the centre of a group planted on the left as well as on the right. These portraits, addressed to the eye, will prove of great assistance to those who are desirous of appreciating the beauty of groups.

Few will deny that one of the chief beauties of shrubberies and ornamental plantations, is the variety of trees and shrubs which are displayed in them. A good deal, no doubt, depends on the character of the ground, the distance, and the arrangement; but still, the grand source of the beauty and interest, when so many are botanists and arboriculturists, is the number of species and varieties.

We must now study not only to display in our grounds the picturesque, but the gardenesque; and, accordingly, there is scarcely a limit to the variety that may be introduced, and that with admirable effect. One word here regarding this subject. It is for gentlemen and gardening ladies to bring about reform; they have only to insist on planting *collections*, instead of a few kinds forever repeated. This will effect a double good; it will establish arboretums, and add immensely to their interest; and it will render necessary the propagation of a great number of species and varieties in nurseries, which will greatly increase the business.

THE DIANA GRAPE.*

IONA, N. Y., *February*, 1857.

MR. J. J. SMITH.—DEAR SIR: I send you a painting of the Diana Grape which very truly represents its beauty, and, also, a hasty description of it, believing it will be acceptable to the readers of the *Horticulturist*, and particularly to those who are wishing for a grape "earlier than the Isabella, and better than the Catawba."

Seven years since, the exquisite perception and unerring judgment of A. J. Downing, after two seasons' acquaintance with its fruit, "unhesitatingly pronounced it the best of American grapes." Time has not only affirmed the decision, but more fully developed its surpassing excellences and beauty. In habit and appearance, it strongly resembles the Catawba, and is undoubtedly the offspring of that fine grape, but it is a much more vigorous grower, and, in consequence of ripening its wood much earlier, it is more hardy, and its fruit is not, like the Catawba, liable to occasional injury by "rot."

It grows without difficulty from "single eyes," in the hands of the skilful propagator, but does not take root readily, in the open air, from cuttings. Layers furnish the best plants for immediate bearing, and, when well grown, produce fine specimens of fruit the first season after planting. To exhibit its excellence, it *requires* such treatment as all other grapes *need:* soil deeply worked, dry, and generously, but not excessively enriched, full exposure to the sun, and breadth of border proportioned to its rampant growth. It is not dainty, but does not tolerate ill usage.

Its berries are slightly less in size than those of Catawba, of the same globular form—bunches very compact and heavy—conical—not properly shouldered; but the main bunch has generally a small one appended by a long branch. In color, it resembles its parent, but is subdued by a delicate tinge of lilac, which gives an exceeding loveliness of tone that seems to invite the expectation of its superior flavor. The berries have, generally, upon their exposed surface three or four small white stars whose rays are often obscured by its copious bloom, showing only a milky dot. The berries adhere strongly to the peduncle, which is woody, and consequently fitted for long keeping, which is one of its valuable characteristics.

Towards the last of August, in this vicinity (fifty miles north of New York), it has made considerable progress in ripening, and has become "good" to eat, being very sweet and juicy, with but little toughness or acidity in its pulp. At this period, it has something of the foxiness that characterizes the Isabella and Catawba. This is fully two weeks before the Isabella arrives at the eatable stage, and before the Catawba has begun to color.

As the season advances, it parts with all of its foxiness and the acidity in its pulp, but retaining a vestige of its toughness scarcely perceptible, it becomes

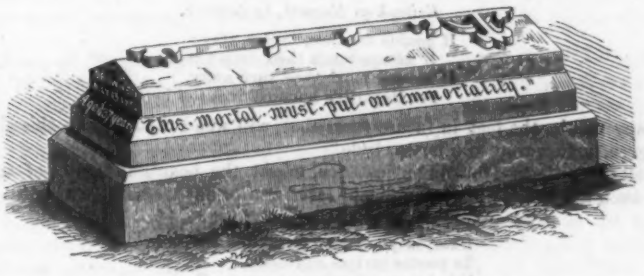
* See Frontispiece.

exceedingly sweet, juicy, rich, and vinous, and delightfully aromatic. In pure, high, vinous flavor, it greatly surpasses the Catawba, in its best state, at Cincinnati, and ripens two degrees of latitude further north than the Isabella. Although it ripens early, it is not injured by hanging late on the vines, and severe frosts destroy none of its vinous life or aroma. C. W. G.

THE REAL MONUMENT TO DOWNING.

BY ONE OF HIS ADMIRERS.

Mr. Editor: I was greatly interested to see the representation of the monument erected in the grounds of the Smithsonian Institute, in your last volume, and though I should, with you, have greatly preferred that it should have been placed over his grave, I too, as one of the interested, acquiesce. Perhaps you and your readers will be pleased to see the figure of the real monument erected to his memory. It is at Newburg, in the church ground, where I have frequently visited it with interest; and I consider it a most perfect memento in all respects, characterized by the best taste, such as he knew so well how to inculcate in whatever he undertook.



MONUMENT TO THE LATE A. J. DOWNING, IN THE CHURCH CEMETERY AT NEWBURG, N. Y.

The inscription is—

"This mortal must put on immortality."

"Be not dismayed, I am thy God."

Bitter was the day, and bitterer still was the blast, that whirled around me, as with shivering hands I scraped away the snow which had buried in its folds, as with a winding sheet, the above inscriptions; and yet cheerless and desolate as were the feelings inspired by the scene around me, they did not compare with the deep sorrow with which I well remember I saw entombed here all that was mortal of our lamented friend. I shall not soon forget that summer day, when still stunned by the horror of his sudden death, I witnessed that solemn and impressive service amidst those trees and flowers that he had planted and loved so well, and which seemed, in their abundant gratitude, to bloom more sweetly for his hands than for any other. His death was so sudden, and his burial followed so hard upon it, that one could scarcely realize that even here, into that blooming paradise, the destroyer had come.

It seemed to have been the desire of his friends that the last known and seen

of him on earth should be as lovely as was his life. As he was born among flowers, so among them he lived and was buried.

In the careful culture of his beautiful home, he never permitted any evidence of neglect. Every fallen leaf, even, was constantly removed; so in his death there was no evidence of decay, in the full beauty and prime of manhood; without a spot or blemish was he stricken down; neither old age, nor sickness, nor misfortune had laid their heavy hands upon him, but like a beautiful meteor he disappeared; and many years must roll on ere those who admired and loved him will have forgotten his *brightness*.

The adoption of the texts as above must be deemed every way satisfactory, and more in accordance with proper feeling than any elaborate effort of the Muse; and yet there have been successes; I am tempted to quote two examples, which in their sentiments seem to apply to the departed. The first is the

Epitaph on John Dryden, by the Bishop of Rochester.

This Sheffield raised, to Dryden's ashes just,
There fix'd his name, and there his laurell'd bust.
What else the Muse in marble might express,
Is known already; praise would make it less.

Hogarth's is in the proper spirit, and applicable in some respects:—

Epitaph on Hogarth, by Garrick.

If genius fire thee, reader, stay;
If nature touch thee, drop a tear;
If neither move thee, turn away,
For Hogarth's honored dust lies here.

Many will be the feet in future years that will wend their way to this shrine of one greatly endeared to a large circle.

Well, indeed, in Downing's instance, might the beautiful words of the poet have been applied, as his coffin disappeared among his trees. And now—

"Linquenda tellus et dormus et placens,
Uxor, neque harum quas colis arborum,
Te præter invisas cupressos,
Ulla brevem dominum sequetur."

Which, literally translated, would read thus: "The world must be given up, and home, and the gentle wife; and not one of all these trees you have cherished, except the envious cypress, shall follow thee, their short-lived master, to the grave."—

VISITS TO COUNTRY PLACES.—No. 8.
AROUND NEWPORT, R. I.

THOUGH climate exercises less influence upon the life and health of animals than on plants, it is very desirable to the animal—man—neither to be roasted nor frozen; at Newport, by general consent, it is admitted there is a more agreeable temperature, both summer and winter, than in any latitude of ours so far north. If the people of this country are ever able to afford it, and they will be, most assuredly, they will have two cities, one for winter and one for summer; one where trade and manufactures can flourish, and another on the sea-coast, or in the mountains. It is fast coming to this; our desirable watering-places are now crowded; those who can manage to do so, have their own dwellings, and Newport can boast of some of the best in the country. Bancroft, the historian, George Calvert, of Baltimore, David Sears, Robert Mason, Sidney Brooks, and Mr. Ritchie, of Boston, William

Beach Lawrence, Samuel Nicholson, &c., of New York, Samuel Powel and John A. Brown, of Philadelphia, Ralph Izard and Henry Haywood, of South Carolina, George Jones, of Georgia, and various other gentlemen, have chosen this place for its climate and its society. From this section and the South, there are fewer housekeepers than from the eastward, and we verily believe it is because the access from New York is over a sometimes rough sea; but mainly from the arrival of the boats at the Newport wharf at night. In case of a storm or a fog, it is vastly disagreeable. A minor nuisance, but still a nuisance that should be abated, is the horrible din of stentorian lungs hired to cry the names of the hotels, than which nothing can be more preposterous, as every one has made up his mind as to accommodations before arrival. It is a great drawback to Newport that it is so hard to arrive and depart. Had the scheme of the Long Island Railroad, to take passengers to the place, been carried out, the number of residents, in both summer and winter, would have been vastly increased.

Once fairly settled on the island, however, you begin to feel the genial influences of the place; it is climate (and society united) that has given back to the jaded citizen some of the feelings of health; that this is the case, the return of the same immigrants year after year testifies; many of these are beyond and *above* the mere requirements of fashion; they have experienced the benefit, and desire their families likewise to enjoy it. Hence many have built fine houses; others, mere boxes for a few weeks' occupancy. Among the most finished, we might say the most, is the

Residence of De Lancey Kane, Esq., Beachclyffe, within sight of the bathing-ground, isolated, and yet near the busy haunts of fashion. It is Mr. Kane's own creation, assisted by Mr. R. B. Leuchars, and he has shown, in its details, an educated taste as rare as it is correct. A fine mansion, in the style of the best class of Belgian chateaus, is situated in the midst of about twenty acres, and is so built as to command the sea as well as inland views. The whole town and its visitors bathe at such a distance as to give animation to the scene from one end of the house, but they are so far off as to look like birds disporting in the waves. The lawn, however, is Mr. Kane's greatest triumph; here difficulties had to be encountered which would have discouraged most. The old inhabitants were satisfied that they must live without trees; the coast is without them; the winds were too powerful, and the thing was pronounced impossible. Not discouraged by the croakers, our host has solved the problem, and this was his mode of operation.

Trees, such as the Abele or White Poplar, were planted on the boundaries, and, within their magic circle, belts, and single trees and shrubs, soon flourished. It is true, that the gales are strong enough to cut the leaves of the Horse-Chestnuts annually into ribbons, but *shelter* has at length done its work, and Mr. Kane now possesses an arboretum of rare trees and shrubbery such as would do credit to any soil or situation; but he has given great attention to his planting, opened and loosened the ground, brought the proper manures, staked, trimmed, and tended, till the place presents beauties and effects which more favored and less windy localities rarely possess. We found here, in great perfection, the following trees; the list, though imperfect, we give with confidence, as that adapted to Newport planting:—

All the Maples except the Sugar and the common English. The best are the White and the Norway.

The English and the Turkey Oaks.

The English Elm, and several others.

The English Hornbeam.

The whole of the family of Willows.

Of the Pines, the Excelsa, Sylvestris, Austriaca, and Cembra, may be said to do extremely well.

Spruces—the Norway succeeds tolerably well; the Himalayan perfectly; and Menzies will no doubt grow.

The Cunninghamia sinensis flourishes well, and is perfectly hardy. The Atlas Cedar, the Japan Yew, and the rare Round-leaved Yew, do well, and are hardy, as likewise do the Chinese, Swedish, and English Junipers. Arbor-Vitæs, such as the Siberian and Yellow, and many others of this group, are entirely successful.

As a test of this climate, we are assured by Mr. Albert Smith that the Amaryllis longifolia has stood out in his garden the last ten years, and the Pride of India, that charm of Southern cities, and which dies down annually in Philadelphia, stood out during the cold winter of 1855–56, and bloomed in the autumn. It does not make a tree, but succeeds as a shrub. Phyllyrias stood out also uninjured. All the Spireas, new and old, do remarkably well, as also the Deutzias. The Belgian Azaleas must be protected from the wind. Six sorts of English Heaths withstood the cold effects of *the* cold winter, and flowered nearly all last summer. The Deodar Cedar is more successful here than anywhere north of Baltimore, as are the varieties of Chinese Magnolias; and no doubt the Salisburia and Tulip Poplar would grow well.

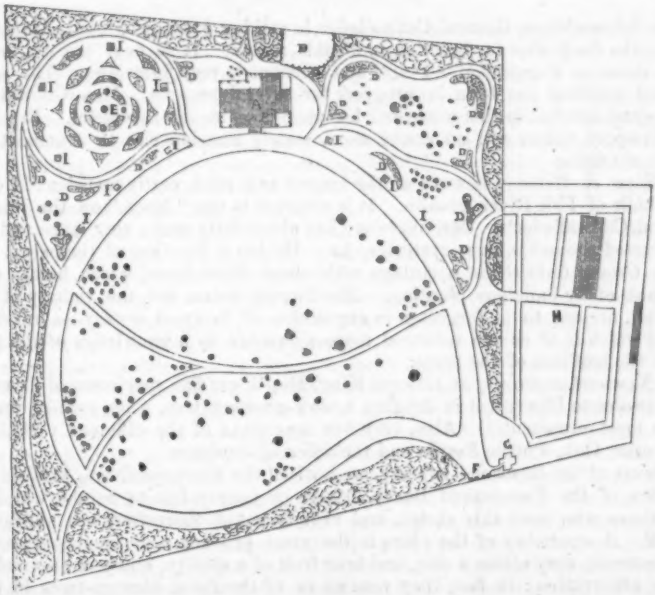
Here is a surprising list for a Northern home; the beneficial effects of the proximity of the Gulf-Stream are clearly traced, and we cannot wonder that so many people are selecting Newport for both a summer and a permanent residence.

At Mr. Kane's, we saw an example of the value of Swift's Lawn Mower, that sets at rest every possible objection to the success of that instrument. The lawn is as perfect as any one can desire—a smooth, even, green carpet, that gives more effect and expression than can be imagined by those who have not witnessed a good example of high keeping. Two men and a horse mow six acres in a day, also cutting round the shrubbery, and this includes taking away the short grass picked up by the machine at the same time that it gives a good rolling to the ground.

The whole effect of Mr. Kane's grounds is eminently satisfactory. Neatness prevails throughout. The visitor to Newport will recall the place by the very

chaste entrance lodge of brown stone, of which the foregoing is a sketch. The orchard-house is seen on the right, and this has for neighbor a large and successful grapery, and a most productive garden, &c. &c. In short, Mr. Kane's already presents the air of an old European place, and when the hospitality of its owners, the elegance of the entire ménage, and the charming family of children (who are great-grandchildren of John Jacob Astor), are taken into the account, we know of no more agreeable spot in America.

The following cut represents the mode of laying out Mr. Kane's grounds by Mr. Leucars :—



A. The mansion.
B. An open vista to the sea.
D. Beds for shrubbery.
E. Flower garden.
F. Entrance gate.
G. Gate lodge.
H. Kitchen garden, graperies, orchard-house, &c.
I. Vases and statues.

Thomas R. Hazzard's, at Vaucluse, about five miles from Newport, is an example of a well-planted place, now somewhat old, and, we must say, a little neglected by its owner. It was the residence of Samuel Eland, who laid it out in the English style of gardening, with artificial water, and groves in abundance, but time has so intermingled the trees and shrubs, that the traces of the original design have been nearly lost. A thorough improver who would go to work judiciously, might make much of Mr. Hazzard's grounds. Even as it now is, it is attractive. The owner is understood to be more attached to rendering his own species happy by charitable acts to the suffering, than to the inanimate but beautiful vegetation around him.

Miss Gibbs', near to Mr. Hazzard's, is a fine old place, with some remarkable

specimens of trees, but we took no notes here of a short walk in the plantations now fairly grown into "woods."

J. Prescott Hall's place, some distance above Newport, is a good example of successful farming and of open-hearted hospitality. Here stands the original Buffum Pear-tree, in full vigor, though it has seen many a blast, and has twice been repaired with cement in its old body. Mr. H. has begun to plant, and already his screens promise protection.

Alfred Smith, an enthusiast in new Evergreens and other horticultural matters, resides in Newport, and was an esteemed correspondent of Downing's. His garden possesses a great variety of the newer trees and shrubbery; a visit to it will be a treat.

Our fellow-citizen, General Cadwallader, is making great progress in laying out one of the finest sites for building in all this region. It is near the sea, on the south shore, at Coggershall's Point, and commands very fine views. The planting and levelling has been in progress for several seasons. Mrs. Cadwallader takes great interest in this work, and her taste is eminently successful. Ere long, the Newport visitor will no doubt see a stately mansion rise to ornament this superb situation.

William S. Wetmore has one of the largest and most costly mansions in Newport, built of Fall River granite. It is situated in the "Neck," on the road to General Cadwallader's. Mr. Wetmore has about forty acres, very large and well constructed graperies, conservatories, &c. He has a fine view of the ocean.

Mr. George Calvert has a cottage with about three acres, which he has made the most of by judicious planting. His literary tastes, and the vicinity of Mr. Bancroft, are not to be forgotten in any notice of Newport society—a residence among which is of course rendered more agreeable by a knowledge of the families of the habitués of the place.

At Newport, especially at Edward King, Esq.'s, are fine specimens of Cembran Pine, twelve to fifteen feet in height; a slow-growing tree, when young, but one of the most ornamental. Also, very fine specimens of the different varieties of evergreens, Oak, Purple Beach, and the different Junipers.

In front of the Redwood Library, we noticed the finest specimen, probably, in America, of the Fern-leaved Beech, fifteen or twenty feet in height, which we hope those who read this sketch, and visit Newport thereafter, will not fail to remark. A speciality of the place is the great produce, and the beauty of the Quince-trees; they attain a size, and bear fruit of a quality, nowhere else realized in our observation; in fact, they remind us of the finest Orange-trees in their greenness and luxuriance.

Before concluding, we may observe that Mr. Kane has planted some three hundred Rhododendrons, quite large; they are employed as "under growth," and are to be cut down when they become too tall; he has tried this method, and finds it to be the only way to get well furnished, stocky plants. In fact, he thinks if the Spruces, Pines, and most of the Evergreens, were headed in, they would be much improved, by being more compact; the soil at Beachclyffe is so rich, and the warm, moist climate, so favorable to these trees, is of so *forcing* a character, that nearly everything grows too quickly, or, rather, too tall and slender.

We shall watch the progress of these places with much interest.

No sketches "Around Newport" can be complete without mentioning the capital fishing that is to be enjoyed here, both from boat and shore. We are constantly reminded, by a wish to throw in a sketch of character here, and a hint of some elegance now and then, that we are encased in a kind of armor which forbids the use of one's natural taste for accounts of conversations, or the introduction of

anecdotes of home circles. Were we more unshackled in these respects, and less confined to particular topics, Newport would afford opportunities to sketch pleasant people no less than scenes; we should, in fact, close every sketch without the mortifying reflection that "kindness," "hospitality," the ladies and the gentlemen who people the delightful places, are to be omitted; for, after all, the paradise is more frequently in the inhabitants than in the most cultivated scenery.

GARDEN VEGETABLES, NO. 4.—BEANS.

BY WILLIAM CHORLTON.

THE genus *Phaseolus*, to which our cultivated beans, with the exception of the English, belong, possesses a wide geographical range. It is found indigenous in Asia, Africa, and America, with its adjacent islands; but Nature has not furnished Europe, so far as investigation has gone, with a single species. We have several on our northern continent, but those that we usually grow as food, and are to be most profitably recommended, are of Asiatic origin. Notwithstanding which, during the growing season, our climate is highly suitable to their condition, and from their productive and wholesome qualities, they have now become a class of standard vegetables.

There have been many species introduced to notice, from time to time, by hardy adventurers, and high expectations have been anticipated; but when fruiting time came, they were found to be only duplicates of former importations, or were of inferior properties, and we have as often had to fall back upon well-tried, and formerly accepted varieties. The hybridizer is, however, doing his share of improvement, and there is still work ahead.

The best soil for this class of plants, without exception, is a rich sandy loam. Any tolerably fertile mould, with a dry bottom, will grow them well enough. A cold or wet situation should always be avoided, as in such the seeds will most commonly rot before vegetating; and, in all cases, there is nothing gained by being in too great a hurry to have the beans in the ground before some solar warmth has been infused into it. Great mistakes are often made in this way, and the seedsman is afterwards blamed for having sold bad seed. The fact is, the organization is of tropical constitution, and we cannot force its healthy development under contrary circumstances; therefore we may say, as the best advice—wait until the peculiar chilliness which winter leaves behind, and with which all cultivators must be acquainted, has been evaporated from the soil. According to each situation or locality, so will the suitable state be, and after this no time should be lost in sowing the first crop. The hardiest of the Dwarfs, and also the Scarlet Runners, will generally succeed if put in early; but with the Lima, or indeed all Pole beans, it is better to let the soil get somewhat warmed by the sun's influence. Seasons differ, and localities are earlier or later according to the latitude, situation, or dryness of base; and on this account I have endeavored to show the actual requirement, instead of mentioning exact time. So far for out door culture; but further, if it be required, and expense is no object, the Dwarfs may be had fresh gathered the year round.

DWARF OR BUSH BEANS (*Phaseolus vulgaris*).—Some of the varieties are only fit to be used while the pods are in a young and crisp state, cut into small pieces and boiled; others are allowed to ripen, and the seeds only cooked; while a few are adapted to both purposes. They require to be sowed in rows eighteen inches apart. Stretch a garden line tight, and with the corner of a hoe open a drill two inches deep; into this lay the seeds, two inches distant from each other; cover up

carefully, and when the plants are fairly above ground, thin out to six inches, at the same time loosen the soil on each side, and draw a portion to the stems. This will assist the growth, and prevent the wind from blowing the plants over; and, if the same operation be again repeated in two weeks, it will be of still further benefit.

There is often much waste of land in the way some vegetable gardens are cropped with the more transient articles, and here is one of the examples. In most edibles of this character, only a small quantity, with frequent sowings, is needed, and if a plot be occupied by such alone, it interferes with the space that may be wanted for those of a more permanent, or later character. Supposing, for instance, we take the piece intended for Water, or Musk-melons, the rows will be seven to eight feet distant, and the vines will not meet till midsummer. Now, if between each of these, a couple of rows of the first and second sowing of Dwarf Beans be put in, they will be pulled and ready for removal before the melons interfere with them; a third and fourth sowing may be accommodated between the later plantings of corn, and a trifle of thought or forecast will readily show how; not only this, but many other things, as radishes, lettuces, &c., may be had in abundance, and still the garden be fully and generally filled with those kinds that occupy the whole space most of the after part of the season. With such ideas, judiciously applied, one acre may be made to produce more than two without them, besides the avoiding the having one-half bare soil all summer.

To keep up a regular succession of Dwarf Beans, it will be necessary to sow about each three weeks, commencing as soon as the earth gets to be warmed a little. In latitude 40°, this will generally be about the first of April, but earlier or later according to the divergence, and continuing on to the beginning of September. Many kinds are to be found in the seed lists. The best I have tried are, for the first sowing, EARLY MOHAWK, a hardy, very early, and good sort. As a second, EARLY CHINA, a free bearer of good quality. For all after summer successions, REFUGEE, a most abundant and profitable kind; and ROYAL WHITE, a fine, late sort, of good flavor, suitable for use either as a legume, or a dried bean for winter. Any ordinary family will obtain enough, for the time being, from a row fifty feet long, and if the successive sowings be attended to, there will always be a gathering ready until frost cuts down the plants. When it is determined to have fresh "string" beans the whole year, the sowings will have to be continued under glass with artificial heat, and in this case the temperature should be kept up from 55° to 60° by night, and 70° to 80° in the day, and the plants placed near the glass. Boxes, three feet long, six inches wide, and five inches deep, with a few holes in the bottom for drainage, are the best for this purpose, each of which will serve for eighteen plants. These may be filled with a well incorporated compost of equal parts of very rotten barnyard manure and good friable loam. Sow the seeds, and cover one inch; when the plants are up, add another inch to the surface. Be careful to have the soil not more than slightly moist, unless with a strong heat, until the seeds are above ground, as they are subject to rot. For this purpose, the *Early China*, or *Early Valentine* are two of the best. Six of these boxes will give enough as one crop, but there should be a fresh lot sown each three weeks. In the forcing-house this plant is very subject to red spider, which, if not kept under, will prevent all success. It may be effectually destroyed by a free use of the syringe, and a little sulphur mixed in the water thus applied.

LIMA BEANS (*Phaseolus lunatus*).—There are several varieties known by this name. The large white is about the best. Being tall growers, they require more space than the dwarf sorts. The most usual, and on the whole the best method, is to plant in hills four feet apart. Mark off the piece intended for planting, in

straight and right-angled lines; at each of the intersections, drive down an iron bar two feet deep; into the hole thus made, sink a twelve foot pole; afterwards dig around each, raise a small hill two inches high, and level the surface; lay down six or eight beans, with the radicle or eye side downwards, and cover one inch. If poles are not to be obtained conveniently, the seeds may be sown six inches apart, in rows six feet asunder, and the vines trained up strings. These, however, will require support, and it is only a makeshift job without economy. When the plants show the first rough leaves, thin out to four of the best, loosen the surrounding soil, and draw a portion up to the stems. At the first start, the wind sometimes prevents the young vines attaching themselves to the poles; when so, they should be twined round, always in the opposite direction to the sun's course. Where there is the convenience of a grapery, greenhouse, or hotbed, a quantity may be sown in pots, or boxes, the first week in March; and, when five or six inches high, they may be gradually hardened off in a cold frame, to be afterwards planted out in the open ground when danger of frost is over. In cold or wet situations, this is of advantage; and, occasionally, under any circumstances with a favorable spring time; but, as a few days only, at the best, can be gained, it is scarcely worth the time and trouble which have to be bestowed.

The sorts recorded above will effectually answer all kitchen purposes, and they undoubtedly possess the finest quality, but as many persons are fond of variety, the following may be noticed:—

Red and White Cranberry.—These are easily cultivated, and may be kept for winter use.

Dutch Case Knife may be used young in the pod, or allowed to ripen for winter.

Scarlet and White Runners are only serviceable as a string bean. They may be sowed earlier than other running beans, and are subject to "burn" out during hot and dry summers.

Carolina is like the Lima, but smaller, and as the latter is better in quality, this has no property to recommend it but its greater hardiness.

Asparagus or Yard Long—of fine flavor when the pod is gathered quite young, as a string bean.

All these last mentioned, excepting the Carolina, may be sowed six inches apart, in rows six feet asunder, and staked in the same way as tall peas; or, the seeds may be planted at the base of each hill of the earliest crop of sweet corn, in which case, if the cobs, after being ready, and the leaves also be stripped off, the stalks will become supports to the beans, without any expense, and will continue to keep the ground occupied for the remainder of the season. Here is another idea in economical cropping.

English or Broad Bean.—This is a very different subject from those we have already treated on. It is the *Vicia Faba* of botanists, and grows three to four feet high, having a short stem, and very sweet-scented, black and white, showy, pea-shaped flowers. Our climate is too hot and dry for its constitution; consequently, it only succeeds as a first and early crop, excepting in very cool situations. When it is obtained, the flavor is so strong that nothing but a piece of fat pork, boiled in the same vessel along with it, will render it at all palatable. It is, notwithstanding, a wholesome farinaceous vegetable, and a small variety is extensively given as food to horses, while other kinds are used as a kitchen edible in Northern Europe. The *Windsor* and *Long Pod* are two of the best for the latter purpose. The seeds should be sowed as soon as the ground is in working order after the frost breaks up, six inches apart, in rows three feet asunder. When the plants are four inches high, hoe the soil up to the stems, and when in full

blossom, pinch out the tops of the shoots, which will cause the pods to swell more evenly. The seeds only are used, and they are fit to gather when fully swollen, but not approaching to ripeness.

All kinds of beans will readily impregnate with each other, if the different sorts be near neighbors and in bloom at the same time, for which reason, when the saving of seed is an object, and purity is desired, they ought to be sown in places as far apart as the limits of the premises will admit of.

How to Cook.—"String" beans, "*Snap Shorts*," or those of which the pods are used, are only good while fleshy and brittle. If they approach towards maturity, they become tough, and are always discarded by any cook who knows her business. Take each pod between the thumb and fingers, with the point upwards, and with a knife cut or strip out the stringy substance, which is attached to the back part. Cut into small strips and throw into cold water for half an hour. Have ready an ordinary sized pan of boiling water, put in a teaspoonful of salt and one-fourth of the same spoonful of carbonate of soda. Boil three-fourths of an hour, drain through a sieve, and serve up with melted butter. Dried Lima, or the other kinds—the seeds of which are used—may be soaked in water from the night previous, and boiled in the same manner.

PETTY ANNOYANCES TO AMATEUR FRUIT GROWERS.

BY ANONYMOUS.

DEAR EDITOR: Allow me to say a few words to your readers of the *Horticulturist* about the petty annoyances of the fruit grower. The source of the present sketch might, with some propriety, be ranked among the same category as grub-worms, millers, butterflies, and caterpillars, were it not that it proceeded, and has to be endured, from a much higher order of beings, though they are often intrinsically equally vexatious.

Now, sir, we live in the country, of course. When I say we, I mean myself and good housewife. A small estate, I may say, is our own, and has become so entirely by our combined industry. We have co-operated together for years, held many consultations in regard to the arrangement of "matters and things" about and around the house, and may congratulate ourselves on having finally succeeded in having things to our taste and satisfaction. Though the whole is, throughout, on a miniature scale, it yet affords us many peculiar pleasures not enjoyed in every condition of life, for it is here that we may reap the fruits of our labor in the true sense of the word. To this, indeed, not a few are strangers. Quite too many fail from neglect to plant and cultivate at all, and hence must reap the fruits of negligence. Let us see the effect of this upon the moral deportment of both. The latter often fail to learn to appreciate and properly respect those that do plant. The systematic cultivator, on the other hand, plants and rears around him, and, as years roll by, his place soon grows into a little terrestrial paradise, abounding in peace and plenty, rendering a home an inviting place, lovely and beautiful, where friends love to dwell.

We greatly enjoy the condition of things around us, and so do our little chubby boys. They also love the charming retreats among the various bowers and arbors. Though they are yet quite young, they have already imbibed the influences of the surrounding atmosphere. They take pride in all these things, and seem to thrive all the better for occasionally lending willing hands in aid where anything requires repair and fixing. They vie to excel, and vie in growing up strong and ruddy,

not unlike the flowers they are so fond of cultivating. But they have learned more; the effect of these influences does not stop here. They would not harm a single flower unbidden; neither touch any of the tempting fruit which surrounds them, unless directed. They know that they will share it when it has fully matured, and already look forward to the beautiful pictures, the fine dwarf pears, the rich clustering grapes, will afford them in their natural perfection, undefaced by them or anybody else. They love pictures, they appreciate them, and know full well that bunches of grapes deprived of half their berries, do not afterwards present a very desirable aspect. At least, but a bad picture.

Such is but a meagre description of the influences of our *country home* upon ourselves and family. Morally, its effects are as obvious, if not more so, than physically. It inculcates and cultivates a sense of *taste* and *propriety* which we find of inestimable value in our intercourse at home or abroad. But how does this apply to some of our friends that occasionally honor us with a visit? Let us draw a sketch from life and see. Let the season be autumn.

The summer is well advanced, and a fine prospect of half-ripe fruit decorates our trees and arbors. All presents a fine prospective, and all are looking forward with high anticipations and gladness, especially to the ripening of the newly added varieties. It is a fine, sunny day, and the family is honored with a visit of some half-dozen ladies. In the absence of the husband, the wife seats them comfortably in the parlor, and entertains them until the big hours of noon draw nigh. Dinner is to be served, and cannot be done by proxy, and, taking circumstances in consideration (for the visit was unannounced), requires rather busy hands to be in time; for, in the country, we dine in the middle of the day, and not in the afternoon.

The company is left to itself for the moment. But time drags heavily with them, though surrounded with mental food and amusement—all that could be desired; for the company boasts of an acquaintance with all these matters. They break up, and start on a ramble through the gardens. They ask no questions. They seem perfectly at home. They seem to require no guide, preferring to go on their own hook.

They advanced but a short distance; their attention was attracted by a dwarf pear-tree. This was a new and rare variety. It bore a few this year, for the first time—the first fruit looked forward to by the proprietor, after bestowing four years of careful attention. The fruit looked somewhat tempting. It was plucked and tasted by them. It was found unpalatable. Another is tried, and another, and all found equally unripe, and are heedlessly and carelessly thrown away, as though there was no reason for disappointing them.

But the depredation does not stop here. They seem to act as though they were in the wild woods, and entirely unobserved. Yet the little boys were taking observations, all the while, from one of their hiding arbors. Though surrounded with flowers of beauty and fragrance, this seemed to make but little impression upon their cultivated minds (?). But the ornamental grape arbor seems to offer new and better attractions, and thither they repair.

The fruit hung in its grandest beauty, in rich clusters, just on the verge of assuming the amethystine hue of ripening. The temptation was greater than the first (especially to such as have learned more of everything else than "lead us not into temptation.") It proved irresistible, and, for the time, all moral law of propriety was lost sight of. Down came the fruit, and all accessible bunches having berries with *only* a *purple blush*, were picked!

The actual value of such an amount of fruit, and much better fruit than this, is considered as nothing; but the almost unsurpassable beauty of the arbor, where

the work of art and nature were so successfully interwoven, presenting a picture of which we felt proud, was sadly the worse for it in the eyes of an amateur.

As these proceedings were progressing; the silent lookers-on could endure it no longer. They stole away unobserved, and told their busy mother all about it. She went to the rescue. But what would she do? Scold them? Put 'em in jail? as these towners would be very ready to do, were we to venture to town, and attempt to act their part. Nay, we must take it all good-naturedly. In this case, as dinner was over, and a few hours spent in social *tête à tête*, the poor things needed no further chastisement, for their imprudent violation of the laws of health by eating an undue quantity of unripe fruit, inflicted its punishment most keenly; it told a sickening tale on them.

Trivial as the subject of this sketch may appear to you and others, it is not the less truthful, and is what we have frequently to undergo; and I ask whether you do not consider such conduct *very annoying*, especially when it has to be endured from such as lay claims to the advantages of a good education? To the generality of amateurs, it is ever a pleasure to give, but few will be found who do not keenly regret having the things in which they feel so lively an interest pillaged and despoiled; most who cultivate, have learned to value them too much to be thus trifled with. Very often we have new varieties, just coming into first bearing, in the cultivation of which we have spent time and money, and are thus deprived of ascertaining their real qualities.

Sketches, *ad infinitum*, of a similar character, and some far more vexatious, could be added, if desired; but this may, perhaps, suffice for the present (if not already superfluous).

HOW TO TREAT PEACH-TREES.

BY THE LATE A. J. DOWNING.

April is the time to "shorten-in" your peach, apricot, and nectarine-trees, both for the sake of the fruit they will bear this season and the health and good condition of the trees. I suppose everybody understands the difference between shortening-in and common pruning. If not, I must make a long story short by saying, that shortening-in is nothing more than cutting off the *ends* of the last year's shoots.

Suppose, for instance, the case of a young peach-tree just coming into bearing. The growth of last year consists of shoots, all over the outside of the head, or top of the tree, each shoot from ten to twenty inches long. Well, in the case of such a tree, I should shorten-in every shoot one-half—that is, I would cut off five inches of the end if the shoot is ten inches long, or ten inches if it is twice that length. If the tree has made but a moderate growth, then I would take off only a third; or the same if there is but a scanty store of blossom-buds. But if the tree is strong and healthy, and shows an abundance of blossom-buds, then half the length of the last year's shoot is not too much.* The fruit will be larger, you will have as many bushels, and the flavor will be much richer; and what is of great consequence, the constitution of the tree will not be impaired by overbearing.

In the case of large, or old peach-trees—especially if they have been neglected, or badly pruned—something must be done that will bring them within bounds

* I mean, of all the strongest shoots. The weak ones may be left two-thirds their whole length.

again, and restore them to good condition. This, as I have satisfied myself, may be done by "heading-in," which is nothing else than cutting back the ends of the principal limbs—say from two to four feet—in order to make the tree throw out a new head of young, healthy bearing wood. Of course, this proceeding loses you the crop of fruit for this year; so, that if that is important, you must take *one side* of the tree this year, leaving the other side to bear, and next year head-in the other side. In this way I have restored old apricot and peach-trees that were "given up by the doctors" as superannuated and worn out in service, to a pretty respectable condition of youth again; good at least for half a dozen years more.

It is the fashion nowadays, when the chemists and doctors wish to know what is to be done to help a plant or tree, to *examine its ashes*. It is, in truth, not a bad plan, and is evidently founded on the old doctrine that the new grows out of the old; "ashes to ashes and dust to dust." Exactly what the elements of the peach-tree ash are I don't know, for I have not been able to find any analysis; but I conclude they are pretty largely *lime* and *potash*, for I have found by repeated trials that *wood-ashes* is the very substance (along with sufficient manure in the soil, mind), to maintain a healthy, substantial, and productive habit in a peach-tree.

Don't be so foolish (as many persons are, when they are going to give an extraordinary relish of a new-fangled manure to a plant), don't be so foolish as to content yourself with sprinkling four or five handfuls of ashes around a peach tree and expect its leaves to turn color with a lease of new life. Take half a peck of *leached* ashes to a young tree, or half a bushel to a full grown tree—in that proportion at least; put not a dust of it around the trunk (that is, so far as benefiting the roots go), but make a calculation with your eye of how far the roots of the tree spread; it may be two feet, it may be six feet every way from the trunk. Then, having satisfied yourself about where the greater part of the *young fibres* are, spread the ashes on the surface of the ground, over them, and turn it under about three inches with the three-pronged spud, or a light spade. If such treatment as this don't give you healthy trees, then your stock is radically diseased, and only worth a place on the wood-pile.

That little enemy, the peach-worm, will very likely have established himself in your trees; he is already there to a dead certainty if you are not wide awake to his sapping and mining habits. If, therefore, you have not been over your trees last fall, and got the upper hand of him for the next six months, altogether the best way of doing business with this gentleman is to Lynch him on the spot, by ferreting him out of his hole, in the neck of the tree, just below the surface of the ground. You can do this good turn for a peach-tree in five minutes, by lifting the soil around it two or three inches deep, laying bare the stem just between wind and water, as the old sailors say. If all looks clean and smooth there, very well; replace the soil again. If, on the other hand, you see *gum*, then look out for the enemy. Scratch a moment with your knife where the gum oozes out, and you will get on his trail; cut into the bark till you find him—in the shape of a white grub, three-quarters of an inch long—and when found, "make no note of it," but settle his accounts as rapidly as you can.

This grub comes from an egg laid in the bark, in summer, by the winged insect. Unless the creature is wonderfully abundant, it contents itself with looking about for the tender bark at the surface of the ground. On this account it is a good plan to outwit the rascal by heaping up a little cone or pile of wood ashes, tan or sand, say six inches high, around the trunk. The sole object of this is to guard the soft place in the bark at the neck of the tree. On this account you must clear away the pile every fall, so as to let the bark harden again. If you

do not, but keep it there winter and summer, you will find that it does no more good than blowing against the wind—for the very plain reason that the bark becomes tender at the top of the pile, instead of the surface of the ground, as before.

Some years ago a good deal was said in favor of pouring boiling water about the neck* of peach-trees. It was said to kill the worms and do no harm to the tree. I am an advocate for this practice. I do not consider it, by any means, so thorough a means of ridding the tree of worms as "war to the knife" is, but still, it will in most cases do the job for them most effectually; and many a tree that stands near the kitchen door may be protected in this way by her who holds the kettle for a weapon, as well as by the "regular army" of practical gardeners.

Besides this, I have satisfied myself, by experiment (though I am sorry I have not yet had time to get up the *theory*), that a good dose of hot water is a means of bringing-to many a peach-tree just about giving up the ghost. It seems to rouse the vital powers; and if there is life enough left, a good scalding at the neck seems to produce a reaction that is at times quite wonderful.

Three years ago I had two trees, a peach and a favorite apricot, that had been failing for a couple of seasons—often thought before that very serviceable trees. They had been rather badly treated by the worm, to be sure, but that had been attended to in time, and the roots appeared to be in very fair condition. Still, the trees dwindled, looked sickly, and bore little or no fruit. As a desperate remedy, I resolved on a trial of hot water. I removed the soil directly round the neck of the tree, making a basin three inches deep and twenty inches across. Into this I poured twelve gallons of boiling water.

To my great satisfaction the trees, instead of dying, immediately pushed out vigorous shoots, took a healthy appearance, and made a fine growth of wood, and have since borne two crops of delicious fruit. I experimented last year again, with equal success, and now am ready, like old Dr. Sangrado, to prescribe *hot water* in all desperate cases. Yours,

AN OLD DIGGER.

PROPAGATION BY MERE LEAVES.

Richard Bradley, in the last century, published a translation from the Dutch of Agricola, on the "Propagation of Plants by Leaves," in which it was asserted that, by the aid of a mastic invented by the author, the leaves of any plant dipped at the stalk end into this preparation, would immediately strike root; the book was adorned with copper-plates, exhibiting both the process and its result, in the form of fields stock full of orange leaves growing into trees.

This is absurd enough, yet it originated in the discovery that the mere leaves of some plants will grow under special circumstances—a fact often supposed to be much more rare than it is. Rochea falcata, the orange, the aucuba, and the fig, are named, by Professor Morren, as instances of leaves which will multiply their leaves; the power of Bryophillum to do the same thing, is a familiar example. Echeverias grow immediately from the leaves that naturally fall off even its flower-stalks. Hedwig found the leaves of the Crown Imperial, put into a plant-press, produce bulbs from their surface. The Ornithogalum thyrsoideum, the Theophrasta, the Cardamine pratensis, are said to be cultivated thus. Ferns, especially the Woodwardia radicans, do the same. It is even said, by Turpin, that water-

* I mean by the neck the bottom of the trunk, just at the surface of the ground, where the roots start out.

cress leaves, cut up by a bird for its nest, "produce presently from their base and below the common petiole, at first two or three colorless roots, then, in their centre, a small, conical bud, from which successively arise all the aerial parts of a new water-cress plant, while the roots multiply and lengthen.

M. Flourens also mentions a case of Purslane, whose leaves, divided into three, produced as many new plants, each having a root, stem, and leaves. In the *Transactions* of the London Horticultural Society, is an account of a Zamia, each of whose scales (see figure below) produced a new plant, when the central part of the stem was decayed.

Some leaves of mint (Mentha piperita) were planted, without any portion of the substance of the stems upon which they had grown, in small pots, and subjected to artificial heat under glass. They emitted roots, and lived more than twelve months, having natural roots.

In gardens, we have many instances of the same kind. Hoya, or the wax plant, is a common instance; Gesnera, Clianthus punicens, Gloxinia speciosa, are also well known, but it is probable that most leaves, when separated from their parent, are incapable of doing so for reasons which we are not yet able to explain. The scales of a bulb will, with some certainty, produce new plants under favorable circumstances, viz: a strong bottom heat, moderate moisture, and a rich, stimulating soil.

Scale of Zamia sprouting.

Leaves intended for cuttings, should be taken from about the middle of a branch. Gloxinia, Bryophillum, Lilies, &c., may be experimented upon by the amateur. If we wish to get on very quickly, the midrib on the lower face of the leaf may be broken in several places, without injuring the limb, and so lightly that the broken places can scarcely be distinguished; the lower face of the leaf is then placed on the earth of a pot. Soon at each fracture a little callus develops itself, which gives rise to roots as seen on next page, *c*. Some leaves, when employed as cuttings, send out roots and buds at each incision, as in Hemionitis palmata, Bryophillum, &c.; *d*, shows how this effect is produced. Time is required to accomplish this, and especial attention must be paid to burying the end of the petiole, or the base of the leaf; *e*, represents Theophrasta

latifolia with its leaf cut in two, which struck and developed buds; the dotted part, shown in the upper half of the leaf, *e*, was removed, in order to put the leaf

into a little pot, but this did not prevent the success of the cutting. The above is abridged from Dr. Lindley's new edition of his "Theory of Horticulture." *a*, indicates at what place we may cut the leaf without hurting the plant; the leaf being placed in the earth forms a callus at its base, *b*, whence the roots, and, consequently, more shoots, spring up.

THE RECONSTRUCTION OF OUR FORESTS.

My Dear Horticulturist: You were so kind as to embody in an article for your November number, on the use of steam power in the more common affairs of life, some thoughts I communicated on the subject.

The season for planting trees is now rapidly approaching, and some facts in connection with pedestrian steam-engines, induces me to ask the favor of submitting a few thoughts on the duty of land owners to plant trees, and plant them this spring.

Though the *Horticulturist* has frequently urged and enjoined this duty in past volumes, it doubtless has many readers in 1857 which it has never had in former years, whose particular attention is desirable, and no old reader will fail to be benefited by having this duty urged upon him again.

The necessity for thus pressing on the notice of your readers the importance of tree planting, was forcibly demonstrated by witnessing the feats of one of these pedestrian engines in cutting up the trunks of large trees into lumber for purposes of utility and necessity. The pedestrian saw-mill is by far the most energetic and terrible devastator of the forest known at present. They are taken to portions of forest or timber which would never be touched if the logs had to be conveyed to watercourse or stationary steam saw-mills.

I do not object to having trees cut down and sawed into lumber for purposes of utility in building and fencing. But how long will the existing forests in

America last, if the terrible havoc now annually made on them is not in some way provided for? This can only be accomplished by planting. We Americans inquire of ourselves in regard to most undertakings, "Will they pay?" and "Will the pay come soon?" The answers to these questions, for the most part, determine our actions. This is especially true as applied to the masses; for here and there we find persons willing to labor and wait for the reward. This is especially true in application to horticulturists and florists.

In my former letter I spoke of the good the steam-engine was capable of accomplishing for agriculturists and horticulturists. Your article called attention to two builders of portable engines, one in Delaware, the other in Ohio. I find on inquiry at the Ohio establishment, that a very large majority of the engines constructed are used for saw-mill purposes—in other words, for the destruction of the forests. *They pay better* is the secret, and so they send out large numbers, annually, on their double mission of *life* and *death;* life to buildings and improvements, death to the forests.

These pedestrian lumber-cutters appear so insignificant in locomotion, or after locating in the forests, that, without evidence, we could scarcely give them credit for the terrific energy they possess in converting trees into useful and necessary forms of lumber. One pedestrian mill will make *three* to *five times* as much lumber as any ordinary water-power or stationary steam saw-mill. Almost an acre a day of average forest or timber is required to keep one steadily at work. Yet they are only one of the many agencies at work in destroying our forests. Each year these combined agencies seem to gather new strength for the next, and the secret is, *they pay.* Let your readers, kind *Horticulturist,* make, each for himself, a rough estimate of the surface of our primal forests, each year stripped to feed the pedestrian and local saw-mills; the thousands of steam-engines propelling railway trains and steamers on our rivers, where coal is not to be had; and all the other demands for rails, shingles, fuel, cross-ties, &c. &c., and I think we shall all be of one mind in regard to our duty to take immediate measures to compensate for this energetic destruction. But the loss of the forest brings some secondary results which must not be overlooked, for their importance holds first rank. I allude to the influence on climate and the cereal crops of our country. It is of no use to stave off the consideration of these topics, they must be met, and we of this generation may as well commence to build up, as well as destroy our forests. It must and will have its day of "small things." It must have a starting point, and you, dear *Horticulturist* must lend a helping hand.

Planting trees—trees that are natives—trees that are valuable for fuel alone, as well as valuable for fruits and æsthetic purposes, *will pay, and pay well.* But you, kind reader, who do the planting, may not get the pay, but those who come after you certainly will realize it. Benefits, varied and valuable, almost fabulous in number and kind, will flow to those who come after you, and take your places in this busy world. Money you may get more speedily by cutting down, than planting and cultivating trees during their earlier years. But your money cannot compensate for the absence of trees on our soil. Money has its uses, but it is not omnipotent. It cannot create a forest to furnish wood for utility and beauty; the price of this is time, and toil, and waiting.

Soon the fetters which now hold our soil and watercourses in close embrace will be unclasped by the advancing sun. The tender herb, the beautiful flower, as well as the humble grass, and nobler trees, will again spring into new life. The earth will again be clothed in her magnificent vegetable garniture, gladdening the eye and rejoicing the hearts of us all; while, at the same time, this terrible work of destruction to the forest will go on with redoubled energy.

Let me beseech your readers to commence now the reconstruction of the wasting forests. The time of year in which this can be done is so brief and fleeting, a little hesitation about the resolve to do so, and the moment has gone for another year.

The necessity and utility, coupled with the real pleasure of planting and protecting trees, should lead to immediate action; the ultimate beneficent results will as surely follow as that cause and effect are linked together.

F. C. McELROY.

ZANESVILLE, O., Feb. 1857.

A SELECT LIST OF ORNAMENTAL SHRUBS, VINES, &c.

PLANTERS and improvers are now looking over their lists of garden shrubs, flowers, and vines, and may not object to read in our columns, lists of a few that are valuable, if not indispensable; while they are at the same time hardy, and requiring only common garden soil.

The most desirable hardy, deciduous shrubs: *Forsythia viridissima*; Pink Mezereon, *Daphne mezereum;* Japan Quince, two sorts, white and scarlet, *Cydonia japonica;* Double Almond, *Amygdalus pumila pl.;* Double Purple Tree Pæony, *Pæonia moutan Banksii;* White Persian Lilac, *Syringa persica alba;* Chinese White Magnolia, *Magnolia conspicua;* Soulange's Magnolia, *M. soulangiana;* Sweet-scented Magnolia, *M. glauca;* White Fringe Tree, *Chionanthus Virginica;* Garland Deutzia, *Deutzia scabra;* ditto *gracilis;* Broad-leaved Laburnum, *Cytissus laburnum latifolia;* Rose Acacia, *Robinia hispida;* White Tartarian Tree Honeysuckle, *Lonicera tartarica;* Red Tartarian Tree Honeysuckle; Double White Hawthorn, *Crategus oxycantha, alba pl.;* Double Pink Hawthorn; Sweet-scented Shrub, *Calycanthus florida;* Dwarf White Horse Chestnut, *Pavia macrostachya;* Fragrant Clethra, *Clethra alnifolia;* Oak-leaved Hydrangea, *Hydrangea quercifolia;* Venetian Sumac, *Rhus cotinus;* Purple Burning-bush, *Euonymus atropurpureus;* Buffalo Berry, male and female, *Shepherdia argentea; Weigelia rosea* and *amabilis; Spirea Reevesii* and *Flore-pleno; Fortuni Billardi* and *Grandiflora; Mahonia aquifolium* and *facicularis;* Evergreen Thorn, *Cratægus pyracantha;* the Virginian and Maryland Stuartia, *Stuartia Virginica* and *Marylandica.*

The foregoing will furnish a succession of flowers or ornamental fruit from March to November.

A selection of hardy deciduous shrubs of rapid and bulky growth, suited for masses or screens, for immediate effect, is the following: Common Privet, *Ligustrum vulgare;* Carolina Syringa, *Philadelphus grandiflorus;* English Fly Honeysuckle, *Lonicera xylosteum;* Cornelian Cherry, *Cornus mascula;* Common White Lilac, *Syringa vulgaris alb.;* English Filberts, *Corylus avellana;* Common Buckthorn, *Rhamnus cathartica;* Sea Buckthorn, *Hippophea rhamnoides.*

A few of the finest hardy vines, or climbing shrubs, are the following: Large Flowering Trumpet Creeper, *Bignonia (Tecoma) grandiflora;* Queen of the Prairies Rose, *Rosa ratiæfolia;* Chinese Wistaria, purple and white, *Wistaria sinensis;* Sweet-scented Clematis, *Clematis flammula;* Double Purple Clematis, *C. verticella, pl.;* Monthly Fragrant Honeysuckle, *Lonicera belgica;* Chinese Twining Honeysuckle, *L. flexuosa;* Yellow Monthly Trumpet Honeysuckle, *Lonicera frazerii.*

The following is *a list of hardy shrubs, remarkable for the fragrance* of their flowers: Mezereum, *Daphne mezereum;* Fragrant Clethra, *Clethra alnifolia;* Missouri Currant, *Ribes aureum;* Sweet-scented Magnolia, *Magnolia glauca;*

Chinese White do., *M. conspicua;* Chinese Purple do., *M. purpurea;* Soulange's do., *M. soulangiana;* Common Syringa, *Philadelphus coronarius;* Sweet-scented Shrub, *Calycanthus florida. Fragrant vines or climbing shrubs:* Persian and other Lilacs; sweet-scented Clematis, *C. flammula;* Chinese Wistaria, *Wistaria sinensis;* Chinese Twining Honeysuckle, *Lonicera flexuosa;* Monthly Fragrant do., *L. Belgica;* White Jasmine, *Jasminum officinale.*

A list of hardy shrubs that will grow in wet places: Willow-leaved Sporia, *Sporia salicifolia;* Tomentosa do., *S. tomentosa;* Swamp Globe Flower, *Aphalanthus occidentalis;* Leatherwood, *Dirca palustris;* Sweet Willow, *Salix lucida,* and all other willows; Clethra, *C. alnifolia;* Spicewood, *Laurus benzoin;* Winterberry, *Prinos verticillatus.*

A list of hardy shrubs that will grow in dry, poor soil: Privet, *Ligustrum vulgare;* Buckthorn, *Rhamnus catharticus;* Buffalo-berry, *Shepherdia argentea;* Bloody Dogwood, *Cornus sanguinea;* Snowberry, *Symphoria racemosa;* Jersey Tea, *Ceanothus americanus,* &c.

In planting garden beds, do not forget the Dielytra spectabilis.

A selection of plants that will succeed in the shade: Rhododendrons and *Kalmias; English Ivy, Hedera helix.* There are several new varieties of ivy, including the Yellow-berried, the *Ragneriana,* &c. *Aucuba japonica;* the several varieties of *Box* and *Yew;* the *arbor-vitæ,* of which the golden, the filiformis, &c. Buckthorn, Holly, Missouri Currant and Cornelian Cherry; Daphne mezereum; Clethra alnifolia; Bloody Dogwood, *Cornus sanguinea;* the Snowberry, *Symphora racemosa;* Junipers; Savin, and *Styrax grandifolium.*

List of hardy evergreen shrubs: American Holly, *Ilex opaca;* Rhododendrons, *Ponticum* and *catawbiense,* and the Belgic varieties; Laurel, *Kalmia latifolia; Prinos glaber;* Yews, English, Irish, and American; Savin, *Juniperus sabina;* Junipers, of which there are several ornamental varieties; Hemlock Spruce treated as a shrub; Torreya taxifolia; Evergreen thorn, *Crætegus pyracantha;* Pinus pumilii; Weeping Cyprus, *Cupressus pendula.*

For a list of the newer evergreens, see page 227 of the volume for 1856.

As rapid growing trees, the following may be mentioned: Populus angulata and the whole list of Poplars; the Dutch or Cork Elm; the American Weeping Elm; the Ash-leaved and Silver Maple.

THE PEAR CONTROVERSY.

BY DR. J. M. WARD.

IT is marvellous to what extent controversies are carried on, at the present day, by mutual misrepresentation. Devoutly as I had hoped that the charm thrown around the study and practice of horticulture —its peaceful, love-engendering, purifying influence—would preserve its devotees from the exercise of this spirit; that which I had feared seems at last to have come upon us.

These reflections were excited by a perusal of the communication, in the February number of the *Horticulturist*, misstyled "A Reply to Dr. Ward on Dwarf Pears," and evidently penned by the writer without first having acquainted himself with the contents of the articles referred to. Of this I complain, and not that the articles should be made the subject of criticism. That there was a degree of sensitiveness in the minds of some that would make a bare allusion to the failures of the pear on the quince a "ripple on the surface of the waters," I well knew; and therefore it was that I asked that the storm of opposition the examination of the subject would wake up, might not rest, even by implication, on the shoulders of the *Horticulturist*.

The publication of these articles, embodying the result of carefully conducted experiments, I regarded due from myself—a debtor to the cause of horticulture for instruction often enjoyed from the recorded experiments of others in the pages of this journal. They were penned as the result "of the observations of but a solitary individual in his own fruit orchards,"* in the hope, that being made the subject of reflection as well as criticism, the successful trial of many varieties would encourage some, and the failures of other varieties—if such failure could not be accounted for—would serve as beacon-lights to the less experienced; while the idea of the abandonment of the pear stock by the substitution of the quince for the cultivation of this fruit, would appear, in its true light, as an *ignis fatuus*.

I claim to be misrepresented where the language used so clearly conveyed my meaning, that a misstatement subjects the reviewer to the charge of *wilful* misrepresentation, or else to the more charitable one of having written without having examined the articles reviewed.

Before attempting to substantiate this charge, I would call attention to the closing paragraph, in which Mr. F. more than intimates that I should either cease growing certain varieties of the pear on the quince, or else cease writing against the cultivation on that stock, verily declaring that I object altogether to the use of the quince stock. Again he says: "A certain gentleman who had visited my grounds, had found abundant testimony in favor of the quince stock on my own grounds;" thus intimating, with equal clearness, that I had denied this altogether. Now, do such assertions find support in my recorded views on that point? On page 217, May number, it is written: "A few pears upon quince stocks succeed much better than upon their native stock, and are really so improved in character as to demand their perpetual use," &c.

This charge of *misrepresentation* will now be substantiated by further extracts from the articles alluded to.

* Page 216, May number, Mr. T. suggests that Dr. W. "should have visited other orchards." Would this have helped him in recording the experiments made in his own orchard?

On page 63, February number, it is written :—

"With some varieties I have been eminently successful. The crop during the past season has not only been gratifying to my pride as an orchardist, but has proved eminently remunerative; indeed, the facts will warrant the remark, no crop grown upon the farm has paid so well, in view of the labor bestowed, as a crop of Duchesse d'Angouleme, on the quince.

"The sight of a hundred trees, closely planted in rows, about twenty in a row—each tree resembling its fellow in size and form, and each sustaining as much of a crop as it could prudently be trusted with; the eye here and there lighting upon a specimen with its blushing cheek turned towards the sun, and the whole, when gathered, yielding over twenty bushels—was an argument in favor of dwarf-trees, the force of which the most incredulous could not well withstand."

Again, on page 350, August number :—

"Our experience in this country certainly demands that the Duchess d'Angouleme should, of all others, be cultivated on the quince—the more vigorous growth of the tree—together with the improvement in the quality of the fruit, secures to it, in my judgment, above all others, a substitution of the quince for the pear stock."

Could I have said more in favor of this variety on the quince without exciting a suspicion that I was actuated by other motives than simply giving expression to my honest conviction of its worth?

On page 218, May number, read :—

"In the same year, I planted twenty Louise Bonne of Jersey on quince, all of which are, as to thriftiness of growth, symmetry of proportion, healthfulness of aspect, and productiveness of habit, all that could be desired. These stand contiguous to the failing Bartletts on quince—indeed, all the above are on the same plat of ground, and the physical condition of the soil, as far as the eye can judge of it, being similar."

On page 217 :—

"Forty other Vicars on quince were planted at the same time on a distant part of the same field, have made most wonderful growth, and have borne more or less every year, and from the rapid development of the wood principle, give promise of long lives of usefulness and profit."

Is not my testimony as to the adaptation of this variety sufficiently explicit? if not, I can add, at the close of another season, that the last year's crop of fruit exceeded *twelve* bushels, very many specimens weighing over a pound apiece.

On page 218, speaking of the three varieties above named, it is said of them: "Which, in their thriftiness and productiveness, have far exceeded all expectation." After quoting the testimony of Mr. Rivers—that most accomplished English pomologist—viz: that out of one thousand varieties of pear in cultivation, he grows but four for the Covent Garden Market; three of these are on pear stock, the Louise Bonne de Jersey alone on quince. I added, page 350, August number :—

"No judge of pears will dare to lift his voice disparagingly to the character of that most rapid growing variety, uniformly bearing abundant crops of well-formed fruit, which, though not of the highest flavor, is yet such a pleasant subacid, as to be a universal favorite."

Now, with such testimony in favor of my successful culture of these varieties of pear on quince stock—testimony corroborating that of our most distinguished pomologists—with what justice should I be arraigned as imperatively "pronouncing against the experience of French cultivators for one hundred years, and the English and American for twenty years?" What advantage will it be to the cause of horticultural science, in searching for the causes of the failure of other varieties, to drag the inquirer after truth through the mazes of suppositions and insinuations as to whether the stocks used were not the *native* instead of the *Angiers Quince*, when it had been distinctly stated (on page 218) that they had

been obtained from two of our most reliable nurserymen, the late Mr. Wilson, of Albany, and Mr. Wm. Reid, of Elizabeth City? And since, moreover, the demonstration that they were true to their character, was found in the fact that the varieties known to be *adapted* to the quince had given vigorous growth;—or that other unwarranted assertion that they had been planted with the quince stock from two to four inches above the surface of the ground, when not five in a thousand will show the line of junction without searching for it below the surface. Equally unwarrantable was the inference on which was based the assertion that "I complained that my trees blew down."

If the conversation touching the "exceptions," reported to Mr. F., and duly credited to me by quotation marks, was faithfully and truly reported to him, charity demands (since I repudiate it altogether) that I regard the communication as made through one of the mediums that abound in this spiritual age. I appeal to that gentleman himself to say if such language as is there ascribed to me, is not irreconcilable with my previously recorded testimony.

Equally gratuitous was the remark that where I had success, it was on the much abused quince stock; for, by far the largest quantity of pears I have grown, have been on the pear stock. This is true of the product this past, as well as of all preceding years. The admission, however, of my success on the quince stock—of my having grown on that stock the largest pear ever known—the acknowledgment of an unaccepted challenge for a comparison of fine fruit, the product of the quince stock—is, in the hands of Mr. F., a two-edged sword, cutting more severely him who wields than the one against whom it is directed; for, in the paragraph above, he says: "The doctor's treatment of his trees has violated all the laws governing the growth of the pear on the quince." The admission of success, if not an unfortunate admission, to say the least, is in unfortunate proximity with the charge of "violating, in the treatment of the trees, all the laws governing the growth of the pear on the quince; for, if there be any one fact clearly established in nature —as well in art as in science—it is that success depends upon our obedience to the laws governing that department of science or art.

But the most unkind as well as unwarranted charge is that in which Mr. F. attempts to arraign me against the nurserymen, by representing me as cherishing a "suspicion of their exact truthfulness." Search the pages of the *Horticulturist*, and there will not be found an expression that will make plausible such an imputation. In a challenge for a comparison of fruit, published in the *Country Gentleman*, I named a *nurseryman* as chairman, with power to add two to the committee, restricting him only to those not engaged in the nursery business. Is the challenge of a *juryman* as to his right to occupy a seat in the juryman's box, because he has expressed an opinion on the merits of the case, tantamount to a doubt of his *truthfulness*?

Most truly unfortunate is it for the cause sought to be advanced, when the views of an opponent are perverted—his facts stated, misrepresented—his admissions concealed—and his arguments obscured by engendering in the minds of those who are to weigh them, a prejudice against him by arraigning him as "an accuser of his brethren."

And now, in conclusion, let me say, the facts embodied in the articles claimed to be reviewed, viz: of the successful culture of certain varieties of the pear on the quince, and the failure of others that had enjoyed equal culture on the same plat of ground; the successful culture of certain varieties that ordinarily do well on the quince, that have done well in certain localities on my farm, and that have failed in all other positions—present phenomena that are still unexplained, unless the causes of their success in one position, and their failure in another, is owing

to the physical adaptation of the soil in one instance, and its want of adaptation in the other, to the growth of the quince stock; while the drift of the argument was intended to caution the inexperienced against the indiscriminate engrafting of all the varieties of pear upon the quince, as well as the transfer of even the approved varieties from the garden to the orchard, unless there was transferred with them the high culture of the garden.

Will not my recorded testimony of the excellency of the quince stock for certain varieties of pear—my denial of the use of the native quince stock—of the exposure of the quince stock above the surface of the ground—my denial of ever having suffered loss from the blowing down of my trees—of the conversation touching the "exceptions"—my denial of any wholesale denunciation of the quince stock—make it clear to the reader that Mr. F. was fighting "a man of straw," instead of contributing his mite toward the settlement of a controverted question?

Kind readers, with a solitary apology for Mr. F., we will dismiss the subject. He is still in the first years of horticultural experience. The golden harvests that glitter in the distance, seemingly near enough to *bewilder*, are yet to be realized. The buoyancy of hope that trees yet under four years of age has inspired, rests upon promises that may never be redeemed. Those promises that now appear to him as "necessitous of success" when airy castle building has given place to stern reality, may be written *promises unredeemed*. When a few more years of observation shall have given age to his experience, may we not hope that, as an *honest inquirer*, he will enlighten us with the facts—the result of his observations in the orchard—instead of giving us theories? When such record is truthfully and faithfully made, it may not be unlike that which is beginning to be made by other cultivators—as unlike the anticipated results as is the present condition of the celebrated orchard of Mr. Rivers, to what we had reason to expect it to be from the glowing description given of it when visited by the lamented Downing.

REPORT OF THE COMMITTEE AD INTERIM OF THE POMOLOGICAL SOCIETY OF GEORGIA.

Your Committee would respectfully report that quite a large number of fruits have been submitted to them for examination, the past season, of which several seem worthy of general cultivation. Among these are—

1*st. Princess Paragon Peach;* ripe specimens were received from Peters, Harden & Co., Atlanta, Ga.; ripe August 19. *Fruit*, large, oval—one side larger than the other. *Skin*, downy, yellowish-white, dotted with red, and, in the sun, nearly overspread with dull red. *Flesh*, white, melting and juicy. *Quality*, best. Freestone.

2*d. Baltimore Rove* (?) *Peach* (from the same parties). *Fruit*, large, roundish, tapering a little to the swollen point, suture extending more than half around. *Skin*, creamy white, with red dots, and a fine red cheek. *Flesh*, greenish-white, red at the stone, to which it adheres, juicy, melting, sweet, and excellent—quite equal to the Old Mixon Cling, with which it ripens, August 24.

3*d. Snow Cling* (also from Peters, Harden & Co.), is a very sweet and juicy Peach, of entirely too small size to merit further propagation; ripe August 20.

4*th. Large White Cling*, from Peters, Harden & Co., bought by them as Stewart's Late, is another Peach of the highest character, ripening about the 20th of August.

5*th*. *The Long Grape*, from Dr. C. W. Long, Athens, Ga. This fruit was found, over thirty years since, by Col. James Long on his plantation, near Danielsville, Ga. The vine makes a vigorous growth. *Leaf*, is heart-shaped, slightly lobed, and similar in shape to the Lenoir. Bunches of fruit somewhat shouldered, very compact, of medium to large size. *Skin*, thin, dark purple, with a thin bloom. *Berries*, rather small (size of Lenoir), tender, very little pulp, pretty sweet, vinous, and very good. This Grape promises to be valuable for wine, being a most abundant bearer, and producing a good, sparkling wine. Ripens the last of August—three weeks later than Lenoir.

6*th*. *The Jackson Cling Peach*, a seedling variety, from Mrs. Col. L. A. Franklin, Athens, Ga. *Fruit*, large, oblong, with a very large, swollen point. *Skin*, rich dark yellow, covered with dark red in the sun. *Flesh*, rather firm, orange-yellow, and dark red at the stone, very juicy, sprightly, and rich; distinct from the Lemon and Blanton Cling. *Quality*, best. A delicious Peach, and it is thought unusually hardy, not having failed of a crop in eight years. Ripe August 20.

7*th*. *Pearl Cling*, also a seedling of Mrs. Franklin; ripens at the same time. *Fruit*, large, round, suture extending three-quarters around the fruit. *Skin*, creamy white, profusely dotted with red, and a rich red cheek. *Flesh*, firm, white, red at the stone, vinous, juicy, and excellent. Very good, or best.

8*th*. A large seedling Peach (freestone), sent September 1, by J. Van Buren, Clarksville, Ga., similar in form to Heath Cling, was received too green to decide upon its quality.

9*th*. *Pace or Columbia Peach*. The largest specimen of this variety we have seen this year, was sent, in August 26, by Jeremiah Gray, of Clarke County. Too well known to need description.

10*th*. A late Summer Apple, also from Mr. Gray, on which we will not report until we get the name.

11*th*. *Stephenson Cling Peach*, from Thos. Stephenson, of Clarke County, is of the Blood Cling family, hybridized with some light fleshed variety, or as if it is a "half-Indian Peach." *Size*, large, roundish, suture distinct. *Skin*, very downy, of a creamy tint, shaded with flesh color, the tint deepening in the sun, and passing through deep pink to a dark, dull, purplish-red where fully exposed. *Flesh*, white, somewhat tinged with red and deep red at the stone, very tender, melting, juicy, and of a delicious vinous flavor. *Quality*, best. September 1.

12*th*. *Louise Bonne de Jersey Pear*, from Peters, Harden & Co. Very fine. September 6.

Beurre Bosc, *Beurre Diel*, and *Napoleon Pears*, from J. Van Buren. Very fine.

Surpass Virgalieu, from Peters, Harden & Co., is most delicious.

13*th*. *Albert's Late Rare Ripe Peach*, from Peters, Harden & Co. *Glands*, globose. *Fruit*, very large, roundish, suture slight. *Skin*, not very downy, yellowish-white, sprinkled with red dots, and with a marbled red cheek. *Flesh*, pale, light red at the stone, very sweet and juicy. Very good. Freestone. September 6.

14*th*. *Golden*, from Peters, Harden & Co., but not of sufficient merit to justify a description. September 6.

15*th*. *St. Michael Peach*. *Glands*, reniform. A beautiful Southern variety of the Pace or Columbia type, but rather later and better than that variety; very large and globular. *Skin*, downy, bright yellow, striped and marbled with dull red, suture slight. *Flesh*, yellow, slightly marbled with red, near the apex the red not reaching to the stone, sweet, juicy, and very good, or best. September 10.

White English.—Late White English or Heath. Beautiful specimens of this

noble and well-known cling have been handed in. Those from Gov. W. Lumpkin, Dr. R. D. Moore, Mr. Waddel, Mr. Pridgeon, and Mr. Donnahoo, of Athens, and Peters, Harden & Co., Atlanta, and one of the same class from Mr. Nelson, were all fine. Ripe, gradually from the 6th to the 20th of September.

16*th*. *To Kalon Grape*, Peters, Harden & Co., ripens early in September, and very good, but said to be a very poor bearer by the growers.

17*th*. *Bland Grape*, beautiful bunches from Peters, Harden & Co., and from Dr. J. C. Orr, were received, early in September, perfectly ripened. A desirable variety, but requires careful pruning and cultivation.

18*th*. *Ohio*, from Peters, Harden & Co., is a very fine tasted Grape, but the berries are entirely too small.

19*th*. *Catawba Grape;* magnificent bunches, from Mr. Axt, through Dr. Linton, the flavor of which did not belie their exterior.

20*th*. *Raymond Cling;* large, roundish, slightly oblong, suture shallow, but distinct. *Skin*, downy, yellowish-white at apex, but nearly or entirely covered with different shades of red. *Flesh*, white, juicy, vinous, and very good. Ripe, middle of September.

Several seedling Peaches were received at this time from Dr. J. Orr, J. H. Coult, of Athens; R. Nelson, Macon; and Peters, Harden & Co., Atlanta; some which were of large size and good quality, but none quite equal, in flavor, to other varieties ripening at the same season.

21*st*. A seedling Apple, raised by Mr. Mangum, and sent to the Committee by Peters, Harden & Co. *Fruit*, large, roundish, much flattened. *Stem*, short, in a regular cavity. *Calyx*, open, in a deep basin. *Skin*, yellow striped, and washed with varying shades of red, a few russet specks. *Flesh*, yellowish-white, fine grained, tender, moderately juicy, with a fine, mild Summer Pearmain flavor, very good, or best. Ripe September 12.

22*d*. *Donnahoo Cling.—Glands*, reniform. *Fruit*, very large, roundish, suture quite deep on one side, and visible entirely around the fruit. *Apex*, depressed, or with but a slight, swollen point. *Skin*, creamy white, beautifully dotted, and tinged with red in the sun. *Flesh*, white to the stone, exceedingly juicy, excelling the Heath Cling in tenderness of texture, equally rich and luscious. A most desirable Peach. Ripe September 10th to 20th. Different from Heath in shape, and still better in quality. From Mr. Donnahoo, Clarke County.

23*d*. *President Church.—Glands*, reniform. *Size*, large, roundish, inclining to oval, suture shallow, often a mere line, with a small point at the apex, which is rarely depressed, with pale red in the shade, and beautifully marbled and washed with dark red in the sun; the exposed specimens are nearly covered with dark red; in size and color it somewhat resembles the Late Admiral, and is quite as fine a flavored Peach. *Flesh*, pale red at the stone, very juicy, melting, of delicious flavor, the fruit free from rot. A great acquisition. A seedling, raised by Rev. A. Church, D. D., President of Franklin College, Athens, Ga.

24*th*. *Oconee Greening Apple*, from Mr. Pridgeon, Athens, Ga. *Fruit*, very large, roundish, flattened. *Skin*, smooth, green, turning to yellow; when ripe, a little brownish in the sun, russet about the stem, with a few scattered russet dots. *Calyx*, open, in a shallow, slightly furrowed basin. *Stalk*, very short, in a rather deep, regular cavity. *Flesh*, yellowish, fine grained, crisp, abounding in a delightful, aromatic, lively, subacid juice. *Quality*, best. Original tree stands on the banks of the Oconee River, a little below Athens. Ripens from October 1st to December.

25*th*. *Yopp's Favorite Apple*, from Robert Nelson. *Fruit*, large to very large, roundish, somewhat conical. *Skin*, oily, smooth, greenish-yellow, with a blush

in the sun, sprinkled sparingly with russet dots, a little russeted about the stem, and somewhat marbled with dark patches made up of minute black dots. *Calyx*, open, in a deep basin. *Stalk*, short, in a deep cavity. *Flesh*, white, fine grained, tender, juicy, almost melting, and of a most grateful, subacid flavor. From Laurens County, in this State. *Quality*, best.

26*th. Horton's Delicious Peach*, from John T. Grant, Esq., of Walton County. Tree bought of Mr. Camp, of Newton County. *Fruit*, large, round, a little oval, depressed at the apex. *Point*, very small, and within the depression. *Suture*, shallow. *Skin*, moderately downy, of a rich, creamy white, with a faint blush in the sun. *Flesh*, white to the stone, with the exact flavor of a Heath Cling. *Quality*, best. October 10.

27*th. Grant's Cling.*—A clingstone Peach, from Mr. J. T. Grant. *Fruit*, medium to large, oblong, tapering to the prominent point. *Suture*, well marked. *Skin*, pale, creamy white, quite downy, and pretty much covered with dull red. *Flesh*, pale red at the stone, juicy, tender, and, when fully ripe, very good.

28*th. Athenian Cling*, from Henry Hull, Jr., Athens. *Fruit*, very large, oblong, depressed at the apex. *Suture*, a mere line. *Skin*, very downy, yellowish-white, marbled with dull red in the sun. *Flesh*, pale red at the stone, rather firm and rich, of a high vinous flavor. A very great acquisition. This and Horton's Delicious, are the two best October clingstone Peaches, and they are of flavor totally distinct from each other—one, a very sweet and luscious, the other of a brisk and vinous flavor.

As we are closing this report, three promising late peaches have been presented by Mr. Y. L. G. Harris, and a box with a great number of varieties of fine apples has been received from J. Van Buren, Esq., Clarksville. On these the Committee will report hereafter, through the agricultural press.

All of which is respectfully submitted. WM. N. WHITE, *Chairman.*

Athens, Ga.

(*From the Southern Cultivator.*)

RIBBON GARDENING.

WE frequently see allusions to "Ribbon Gardening" in the foreign papers; the following will attract some of our enthusiasts of beautiful gardens to the subject:—

Among the more recent innovations in flower gardening, the introduction, or rather more general dissemination of what is called the ribbon system of embellishment, is not the least interesting; or in an artistic point of view the least effective. That it is artistic there cannot be a question, for as associated with architectural objects it is an extension of those lines to which the mouldings and various enrichments owe their entire interest. The idea therefore was a happy one which transferred these multiplied lines of color to garden scenery.

Of the form of a ribbon a notion prevails that a straight line only is admissible. I incline to an opposite opinion, and though I have no objection to a straight line in a proper position, yet if I must have my choice, give me by all means a softly curving line, "the line of beauty," rendered still more beautiful by the gentle play of light and shade upon the variously contrasted colors. A ribbon, to be effective, must be of considerable length, and narrow rather than broad—indeed, six to eight feet is wide enough, and beyond that width they present too large a surface of color, and pain rather than please the eye. I have seen ribbons very effective when only three feet wide, but they were planted with plants of proportionate size.

In the counties of Stafford and Salop this system of gardening is perhaps more extensively practised than in any other part of England. At Trentham, as might naturally be expected, the ribbon system is extensively carried out, and the ribbons are very effective. The principal, which stretches the whole length of the kitchen garden, may be said to be the connecting link between the utilitarian and the decorative departments, and emerging as I did from the garden, the "surprise" of that "blaze of bloom" was not only very dazzling, but also highly gratifying. The following is very effective: Back row—Branching Larkspur, blue; Matricaria grandiflora, white; Petunia Shrubland Rose, rose; Calceolaria Kayi, orange; Myosotis, blue, and Saponaria calabrica, pink, double row intermixed; Geranium Golden Chain, green and gold; Lobelia ramosoides, double row blue. Where the Golden Chain Geranium is not sufficiently plentiful, "Musk" may be substituted with good effect. Mr. Fleming had various modifications of ribbons, and as a hardy one accessible to every one Eschscholtzia californica, orange; Convolvulus minor, blue; and Musk, yellow; the last abutting upon Grass, looked exceedingly well. I must not omit to mention a rivulet of Forget-me-Not. It apparently meanders in a circuitous route between some specimen evergreen trees, and certainly at a distance the casual observer might mistake it for water. The following is a nice arrangement for a ribbon: Back row—Salvia patens and Branching Larkspur intermixed, blue; Matricaria grandiflora, white; Geranium Tom Thumb, scarlet; Calceolaria Trentham Brown, bronzy brown; Calceolaria Kayi, orange; Geranium Manglesi (variegated), and Verbena Tweediana (scarlet), intermixed, white and scarlet; Musk, yellow; Lobelia ramosoides, blue, or next the walk Musk, then Geranium Tom Thumb, afterwards an excellent variety of double Feverfew (white), and backed by Dahlia Zelinda, maroon. These borders were not more than four feet wide, and being full of plants, certainly looked exceedingly well.

Passing on to Enville, the most enchanting ribbon I ever saw was thus formed. The line was a curved one. Back row—Delphinum Hendersonii, blue; Pentstemon gentianoides coccineum, red scarlet; Calceolaria Kayi, orange; Geranium Cerise Unique, cerise; Lobelia speciosa, blue; Geranium Golden Chain, orange variegated. The beautiful play of color in this arrangement was very remarkable. The variegations of the Golden Chain, the flowers being taken off, the cerise of the flowers, coral stems, and peculiar marking of the foliage of the Cerise Unique, divided as the two kinds were by a dense line of bright blue, and backed by the Orange Calceolaria, was a combination of color the effect of which must be seen to be appreciated. For a narrow ribbon no arrangement could be more effective, but it is not every person that can plant out Golden Chain by the thousand, and those who cannot will find a good substitute in small plants of the Flower of the Day, if the flowers are regularly taken off, and the plants are not permitted to get too tall. The Cerise Unique, in this arrangement, will also look best if placed in the full sun; then the stems and leaves get their full color, which is a matter of much importance. I should mention that the preceding ribbon was verged with Grass. Here is another arrangement with a Grass verge: Back row—Humea elegans, brown; Salvia patens, blue; Calceolaria Kayi, orange; ditto, Indian Chief, crimson brown; Geranium Tom Thumb, scarlet; Forget-me-Not, blue; Geranium Golden Chain, orange and green.

I think perhaps the groups at Dudmaston, near Bridgenorth, were still more beautiful. Nothing could exceed them, and I never saw beds so perfectly sheeted with bloom. The garden is small, as compared with those previously mentioned, but the whole of the shrubbery borders were ribboned, and standing as you could at one point, and take in almost the whole of the garden, nearly a mile of ribbon

was presented to view; and certainly the *coup d'œil* was most enchanting. The Variegated Alyssum was very extensively used next the Grass, but in adjoining walks blue Lobelia was introduced. The following is a very nice ribbon: Back row—Dahlia Zelinda, maroon; Calceolaria Kayi, orange; Verbena Tweediana, scarlet; Variegated Alyssum, white. Another very nice pattern was: Back row—Pentstemon gentianoides coccineum, Scarlet and White Phlox mixed, scarlet and white; Calceolaria Kayi, orange; Geranium Tom Thumb, scarlet; Lobelia ramosoides, blue; Alyssum, Variegated, white.

In gardens of strictly architectural design, plain and variegated Hollies, plain and variegated shrubs of all kinds, hardy Heaths, and many hardy American shrubs, offer great facilities for the ribbon system; and I doubt not before many years pass we shall see such ribbons planted extensively. The planter, however, of a ribbon must not stick in his plants at equal distances, and think the ribbon will come without further trouble. The line of demarcation of each color must be strictly preserved, for if the various lines of color are allowed to intermix, the effect, and, in fact, intention, will be marred at once. It is upon keeping the various lines of color perfectly independent of each other, touching but not intermixing, that the whole success of the system hinges; and those who cannot devote sufficient attention to that particular, had better not attempt the plan.

A. P. W., *in Cottage Gardener.*

THE TRUE THEORY OF GRAFTS.

BY LOGOS, PHILADELPHIA.

EDITOR OF THE HORTICULTURIST—

DEAR SIR: A paper headed as above, in the December No., has very much interested me, as it confirms me in the same idea which I have held for some time. I must tell you that I am one of those who care little to know how any operation in this business is performed, unless they can at the same time be permitted to know the reason why. Believing that there are many such among your readers, I make no apology for endeavoring to keep the subject before them.

That *each cell must have its own inherent power of secretion*, has often struck me. I once saw a white Muscat of Alexandria grape, grafted on the end of a cane of the black Hamburg. It of course always bore white Muscat grapes, in every shade of color, every form, and every peculiarity of taste the same as other Muscats not grafted; yet all its sap had to be drawn through the cells or sap vessels of the Hamburg. If the first had the power of forming its own peculiar secretions so as to retain its exact distinctiveness, why should the wood-producing principle be deemed an exception?

If *wood was formed, corporeally, from above downwards*, would it not in time so encase the wood of the stock, that when a shoot sprung out of what was once the stock, it would be of the same character as the scion? For I have never understood that physiologists believe that the bud or eye producing shoot, proceeds, in all cases, through from the pith, as the heart or pith of trees is often dead and rotten many years before the outsides begin to decay.

Satisfied that the true theory of grafting is now settled, I give the following *chip* for what it is worth, in return for the information I have received:—

Two years ago I received a lot of pear grafts from a distant friend. They were buried in the ground at the ends, so as to preserve them a few weeks till the season was further advanced. When that came, the closest search could not find them. In July, while budding pears, I "ran against" these grafts. They appeared

green and tolerably fresh, so I budded them, as I would do with young wood. Every bud had started to grow immediately, and made, on an average, shoots a foot long before fall. The result was that, though I had not quite as strong plants as I should have had by March grafting, I had double the quantity I should have had, besides no failures. I think my practical friends may probably turn this fact to some account.

While on the subject, I would like to inquire on what *theory* root-grafting apples is supposed to render them less hardy or vigorous, as I see Mr. Hovey and others hold. I have compared seedling Kentucky coffee's, alianthus' and Paulownias, with others raised from pieces of roots, and can trace no difference in their relative vigor or hardiness; nor can I see any difference in the vigor or hardiness of a root-grafted rose over one grafted in any other way. But even could I see any difference, I should not rest satisfied with the impression that "I could attribute it to nothing else," unless I could see some trace of a physiological reason why it should be so, which I confess I cannot do. I should be glad if some of our friends who hold Mr. Hovey's view would enlighten us.

NEW PLANTS.

PINUS GRENVILLEÆ. Nat. Ord. *Coniferæ*.—A noble Conifer, discovered by Mr. Hartweg, on some of the highest mountains near Tepic, in Mexico. It is of robust habit, and has in consequence been called "Ocote macho," or male Pine, by the natives. The foliage is very robust, from twelve to fifteen inches in length; leaves are in fives. The cones are solitary, pendulous, straight, sixteen inches long, and three to four inches across the base. This species is easily distinguishable, from its straight cones and robust foliage. In its native habitat it attains to the height of seventy to eighty feet. It has been named in honor of the Right Honorable Lady Grenville.—*Hort. Soc. Journ.*

PINUS GORDONIANA. Nat. Ord. *Coniferæ*.—A companion to the last-named species, introduced by the same gentleman, from the same locality. It is a remarkably handsome species, possessing the longest foliage of any of the tribe yet brought to this country. It attains about the same height as its predecessor. It is called "Ocote hembra," or female Pine, by the natives. The leaves are produced in fives, are sixteen inches in length, not so robust as in *P. Grenvilleæ*, and of a light green. The cones are pendulous, generally solitary, from four to five inches in length, and one inch and a half at the base; they are slightly curved, and regularly tapering. It is named in compliment to Mr. Gordon, of the Horticultural Society's Garden. It is quite hardy, and is a splendid species, the long slender foliage rendering it an attractive object.—*Ibid.*

LACHENALIA AUREA. Nat. Ord. *Asphodeleæ*.—The Horticultural Society purchased this beautiful species of a collector, who discovered it in Natal. It first bloomed in the greenhouse at Chiswick, last spring. It is remarkable for the length of time it remains in flower, a much longer period than any other of this much-neglected genus; although the Lachenalia is of as easy a culture as the Hyacinth and other spring bulbs, we very seldom meet with them in the greenhouse. The numerous broad flaccid leaves, which are a lively green, slightly mottled with purple, fall back upon the ground, and the scapes, which are of the same mottled colors, rise erect to the height of near two feet, profusely laden with its brilliant golden yellow tubular flowers. The individual blooms are much larger than those of *L. tricolor* (the most common species), and are of a firm waxy substance. This species deserves to be in every greenhouse.—*Gard. Chron.*

ON THE HABITS OF THE GOPHER OF ILLINOIS.

Geomys bursarius.

BY J. B. PARVIN, ILLINOIS COLLEGE.

I SEND to the Institution a young Gopher, a little more than half grown, which I hope will reach you in safety. If he arrives alive, take a flour barrel and fill it half full of moist earth, potatoes, corn, or beets, at the bottom, for food, and he will dig down and help himself, if the earth is compact, so that he can make a hole in it without its caving in upon him. I have never seen them drink; but it will be well to set a dish of water where he can come out on the top of the earth and drink it. Keep the barrel covered loosely, but so that he cannot climb out; and set it on a floor or plank, so that, if he should get out, he need not get easily into the ground. His habits of digging and eating you will see only by careful watching in the barrel. He uses his paws and his pouches to carry both dirt and food. He digs long holes in the ground, extending sometimes for rods or even miles, about two feet below the surface, and at suitable distances makes side cuts, at an angle of about 45°, running from the longitudinal main track up to the surface. Through these side cuts he carries up the dirt from the trunk below, as long as he finds it convenient to retain it, in his pouches; then he turns back, and fills this side cut full of quite hard earth down to his main trenches, and then makes another and another side cut further on, filling all these up, and stopping every crevice where light or air can enter, so that his abode, when finished, is one long, winding passage, wholly excluded from all light and air, from one to three or four, perhaps more feet under ground—generally about two feet, except in places where it is made deeper, to deposit food in piles, or to procure water. In these subterranean passages he lives at all times, and gathers food, roots, &c., in summer, and stores them in large, deep holes for winter. He is never seen above ground, except in the rare cases when food becomes scarce in one field, or for some other cause he prefers another; then, he will sometimes condescend to walk a part of the way above ground, rather than persevere in his migration by digging below, and then, for most part, only in the night. Whether they live in droves or families, or only in pairs, is uncertain; but if two strange gophers are put together, they at once attack each other, and the victor devours his antagonist. I cannot, therefore, send you a pair at once, as I promised; and this is the first and only one I have seen this summer, except one killed and mangled in taking, so thoroughly did my boys wage their war of extermination on them last year. I will watch for more in the spring, if wanted. I have not time now for a more particular description, but will answer in future any questions desired. You are aware of its mischievous destruction of hedges and fruit-trees, as also of clover and all root crops.—*Smithsonian Transactions.*

ARE THE FLOWERS OF THE AZALEA POISONOUS?

BY T. M.

A SHORT time since, I endeavored to rescue the Kalmia from what I believed the unjust reputation of being poisonous. I notice that the English horticulturists are now in a flutter about the Rhododendron. They say that honey extracted by bees from its flowers, is poisonous. Dr. Lindley, in combating the notion, admits that it is so in the case of the Azalea, but not in the Rhododendron. Now,

sir, I do think there is some mistake in such an admission. As I observed, when writing of the Kalmia, I believe that poisons are destructive, in more or less degree, to all animals alike. If the honey secreted by the bee, from this source, be so poisonous to man, why is it not poisonous to the bees themselves? One would think that, in the act of secretion, such poisonous material would be destructive to the life of the bee; unless, as I presume few people in this enlightened age believe, the bee were to gather the honey, and place it in his "bag" as an apple gatherer would put the fruit in his pouch. I may be "all wrong," but "that is my impression."

PROTECTING TREES FROM CATTLE.

THE beauty of individual specimens, as well as groups of trees, is often marred, to a great extent, by the means employed to protect them from cattle. None of these are more objectionable than the abomination termed a crate. Where such heavy-looking and unsightly objects are thickly placed, as they often are, the effect is disagreeable in the extreme, and as they have to be endured for years, any substitute that will afford equal protection without their objectionable appearance, should be readily adopted.

The accompanying sketch illustrates a contrivance which combines both support and protection from cattle, and is also neat in appearance. This fence, by being entirely below the eye, is very little seen, and the supports of the tree, being of wire, are scarcely to be distinguished, except upon close examination. If the whole were of iron, it would, of course, be still less objectionable, on the score of appearance. The uprights of the fence, as given in the sketch, are supposed to be stout piles, six in number, driven into the ground at an angle of about 45°, at a sufficient distance from the tree to prevent cattle from reaching the stem or branches. The uprights should be about three feet six inches out of the ground. They are connected by rails placed horizontally, and sufficiently close to prevent sheep from getting between them. From the tops of three or four of these uprights, stout wires are fixed, the upper ends meeting at the tree, where they are attached to a collar, which should be somewhat larger than the stem it is to surround; the intervening space is then to be filled with leaves, hay, or moss, and properly secured, to prevent damage to the bark. These wire supports are, of course, only required when the tree is newly planted: by employing them, stakes—which are rarely effective, and always objectionable in appearance—are entirely dispensed with.

EVERGREENS.—WHAT SHALL WE PLANT?

Mr. Buist's Catalogue.—(Concluded.)

The Euonymus, till last winter, was considered here so nearly hardy, as to be adopted; it occasionally lost a limb, but was, last year, entirely destroyed; still, it may be again planted, with a prospect of success; the green is much more desirable than the variegated, and is a superb shrub.

"*Euonymus*, Evergreen Chinese Spindle-Tree. A dwarf shrub, that grows freely in the shade or sun; makes a beautiful hedge south of Philadelphia, growing in any soil; height, eight to ten feet. In ornamental gardening, it is with us as the Holly is in England, *indispensable.*

"*Fitz-Roya Patagonica*, a new Evergreen, with drooping branches; *supposed* to be hardy here.

"*Ilex*, Holly. Beautiful Evergreens, that do well in Southern latitudes, and tolerably hardy in this vicinity, when protected from the sun in winter. For diversity of character and beauty of foliage, no family surpasses it; it delights in rich soil; many varieties, and our native Opaca not to be forgotten.

"*Juniperus.* The Juniper is a very classical plant, being frequently mentioned by, and highly esteemed amongst the ancients. It luxuriates in every temperate country, even on the most barren soils, being an important feature in all rugged countries—growing on any soil or situation, even under the drip of trees. The plants generally attain a height of ten to twenty feet; many varieties.

"*Kalmia*, Sheep Laurel. The broad-leaved Sheep Laurel, or Kalmia latifolia, is common in all moist or shady woods of the Middle and Eastern States. Its beautifully white and pink crimped blossoms resting on a bed of the richest green, are truly elegant. A dwarf bush.

"*Laurus*, Laurel Bay. Plants with very thick, coriaceous leaves, generally of a spicy fragrance; grow well in any soil, but are too tender for culture in the Middle States; height, from six to twelve feet.

"*Ligustrum*, Prim or Privet. Shrubs with beautiful, dark, shining green leaves: they are often sheared into various forms, and make very agreeable fancy hedges; will grow in shade or sunshine; in height, from six to twelve feet.

"*Libocedrus, chiliensis.* This genus is closely related to Thuja, very recently introduced from the mountains of Chili; it has a beautiful silvery soft green appearance, and will grow from ten to fifteen feet; scarce yet.

"*Magnolia*, the Tree Laurel of the South. Whether regarded for the richness of its foliage, the beauty of its flower, or the majestic habit of the tree, it has no superior, and is everywhere hardy south of Philadelphia and Cincinnati. It attains a height of forty to eighty feet; requires deep, rich soil.

"*Mespilus*, Pyracantha, or Evergreen Thorn. There is not a more beautiful plant during our autumnal and early winter months; neither is there a more neglected one than the present subject; thickly studded with its beautiful coral berries, it forms a very attractive bush or pillar.

"*Philesia.* A very limited and little known family of plants. This is the first species of the genus introduced to this country. The plant has a high reputation in Europe; we hope it may prove as popular here. The foliage is neat, and the flower large in proportion. *Buxifolia*, Buxus, or Box-leaved, *small.*

"*Picea*, Balsam Fir. This tribe differs in its natural habitat from Abies or Spruce, from its growing in lower situations, and will luxuriate in rich moisture where Abies would die; they will grow from 50 to 200 feet high. *Balsamea*, Balm of Gilead Fir. *Cephalonica*, Black Silver Fir. *Frazerii*, Frazer's, ditto. *Nobilis*, a very symmetrical, majestic tree. *Pectinata*, Silver Fir. *Pichta*, Pitch Silver Fir. *Pindrow*, Tooth-leaved Silver Fir. *Pinsapo*, the Spanish Silver Fir. *Webbiana*, the Purple-Coned Silver Fir.

"*Pinus*, Pine-Tree. The Pine-tree grows in every region of the world, from the waves of the ocean to the icy regions of perpetual snow. All the species belonging to the genus are distinguished by the great length of their leaves, which are produced in bundles of two, three, or five, inclosed in a sheath. The cones also are generally erect. The trees, judiciously selected, are suitable for planting in every situation; they generally attain a height of from

50 to 100 feet, though we have them that have not grown four feet in twenty years, whilst others have grown as much in one year. *Austriaca*, Austrian or Black Pine; very desirable. *Cembra*, the Cembrian Pine, conical habit. *Excelsa*, the Bhotan Pine. *Hartwegii*, Hartweg's Mexican Pine. *Laricio*, Corsican or Larch Pine. *Lambertiana*, Lambert's Rocky Mountain Pine. *Macrocarpa*, the Great Hooked Pine. *Monticola*, the Mountain Pine. *Mughus*, Mugho Pine. *Pinaster*, Cluster Pine. *Ponderosa*, the Heavy-Wooded Pine. *Strobus*, the White or Weymouth Pine. *Sylvestris*, Scotch Pine or Fir. *Webbiana*.

"*Podocarpus*, Chinese Yew. A family of hard-wooded evergreen plants, well known to the gardener. The species now offered to notice, is the most useful for out-door cultivation, and, indeed, the only one capable of enduring our winters; several of them are desirable greenhouse shrubs. *Taxifolia*, Yew-leaved.

"*Prunus*. The species of this genus are, generally speaking, more useful than ornamental; that now under notice is a valuable acquisition, suited to our climate, and quite desirable. *Ilicifolia*, Holly-leaved, or Californian Evergreen Plum.

"*Rhododendron*, Mountain Laurel or Rosebay. As many say they find great difficulty in cultivating this plant in the open air, we give a few hints, which, if acted upon, will result in success. That they grow in 'wild luxuriance,' every one who has visited our mountains can testify; their locality there, is on the northern shady moist steeps. We find that they grow well in one-half sandy loam, one-quarter rotten leaves, one-eighth sand, one-eighth well-decayed manure; plant them in the shade of, or partially under, trees on the north side of buildings or fences, in deep, moist soil, or where it can be frequently watered. They are all beautiful, and grow from four to ten feet high, blooming in May or June.

"*Taxodium, sempervirens*, or Weeping Cypress; rather tender with us; the winter of 1851 killed them down to the ground: they are perfectly hardy South, and form a very beautiful tree of rapid growth. It is the 'Red Wood' of California, and there attains a height of from 200 to 300 feet.

"*Taxus*. The Yew-tree is everywhere known, and most frequently chosen for cemetery planting—an 'Evergreen' in memory of the departed. One of the species is used as the badge of the Scottish Highland clan Frazer. The Yew is a plant of comparatively slow growth, though in good, moist, 'but not wet' ground, where it makes rapid progress, it attains a height of from twenty to forty feet: it is frequently used for hedges.

"*Thuja*, Arbor-Vitæ. One of the most recent changes adopted by botanists, is the naming of this well-known family, *Biota*. Whoever reads of and orders *Biota occidentalis*, will recognize our beautiful American Arbor-Vitæ. The whole genus is highly deserving of culture, and the various species form ornamental plants of from five to fifteen feet in height; some are well adapted for hedges; they may be trimmed at any period of the year, and will grow in any soil.

"*Torreya taxifolia*, Florida Yew. A shrub of medium growth, perfectly hardy with us, of a branching habit, *small*.

"*Washingtonia, gigantea*, the *Big* Tree of California. A tree of rapid and robust growth.

"*Yucca*, Adam's Needle. Low-growing plants that shoot up spikes four to eight feet long, of white flowers; not generally adapted for planting with other Evergreens, but are used with good effect on lawns, terraces, or rockwork."

Mr. Buist's list of deciduous trees is also extensive, as are those of Grapes, Strawberries, and greenhouse plants.

The industry and intelligence which have built up the extensive business of Mr. Buist, are exactly such as we would hold up as an example to young nurserymen. Mr. B. has been indefatigable in every department, working early and late with his men, and having no idle hour from year's end to year's end. It is pleasant to record that eminent success has attended his career, and that his large establishment at Rosedale, a short distance below Philadelphia, has no superior in America.

EDITORS TABLE.

[The April Horticulturist has been partly printed without the supervision of the press by the Editor, who was passing a short time in Cuba. This will account for any apparent omissions of the favors of correspondents, as well as excuse errors or deficiencies. As but few of the tourists to Cuba who have written upon this interesting tropical region have had an eye for its gardening beauties, we may hope for some descriptions which will interest the readers of this work. Publisher.

To Advertisers.—We were reluctantly compelled to exclude about a dozen pages of advertisements from the March number, for want of room. Advertisers should send early in the month to secure a place. Publisher.]

Great Sale of Greenhouse Plants.—By reference to the advertisements, it will be seen that there will be one of the largest sales of plants in this city, in May next, that has ever taken place here. The fine collection belonging to that enthusiastic lover of horticulture, Caleb Cope, Esq., is to be then dispersed by auction. Embracing as it does an immense variety of plants, we may specify the camellias, cactus tribes, and the orchids, as superior in all respects. We call especial attention to the sale, and anticipate seeing a large audience of amateurs from all parts of our gardening world.

Elvaston Castle, the seat of the Earl of Harrington, near Derby, in England, has long been one of the wonders of that country, but till lately was a sealed book, no one being admitted but the family and immediate friends. Mr. Downing was obliged to be contented with a peep from the neighboring steeple! Mr. Buist, however, as an old friend of the gardener, gained admission, and stayed all night, most of which he employed in roaming about among its surpassing beauties. At our request he has thrown his recollections into the form of a very good and graphic description, which shall appear in these columns very soon.

Roses.—A select list of roses: La Reine, Baronne Prevost, William Jesse, Souvenir de la Malmaison, Coupe d'Hebe, Madame Masson, Madame Vidot, Prince Leon, Lord Raglan, Paul Ricaut, Madame Domage, General Jacqueminot, General Castellane, Paul's Victoria, Auguste Mie, Caroline de Sansal, Duchess of Sutherland, Gloire de Dijon, Cloth of Gold, Doctor Herron, General Pelissier, General Simpson, Madame Knorr, Mathurin Regnier, Pæonia, Pauline Sansezeur, Souvenir de la Reine d'Angleterre, Toujours fleuri, Triomphe D'Avranches, Triomphe de l'Exposition, Impératrice Eugénie. We give some of the above more to accustom the reader to their names than anything else; being quite new in France and England, they must be rare in America as yet.

The Rebecca Grape.—The entire stock of Mr. Brooksbank's Rebecca Grape was exhausted some weeks ago. He informs us that he will have plants in the autumn.

GREAT YIELD.—An example of an enormous yield in a pear-tree in Devonshire, is thus mentioned in the *Cottage Gardener*—the kind was the Windsor: "The branches of the tree commenced at seven feet from the ground, where the tree is about a foot in diameter. It has been planted thirty years, and in the summer referred to it produced 5,500 pears. So great was the weight, that, notwithstanding it was supported by numerous strong props, the tree was split in two in the bole, beginning where the branches spring off, and extending for two feet down the stem, leaving a yawning chasm in which a man's head could be placed. The split portions of the tree were afterwards drawn together by strong iron bolts."

A TWO-POUND STRAWBERRY!—We take the following as we find it from the *London Illustrated News*, where it appears as if in good faith:—

"*New Plants and Fruits of Messrs. Martin.*—Whatever jealousy we may have had of the extension of French dominion on the Mediterranean some years ago, there can be no doubt that the conquest of Algeria, and the gradual occupation of the districts behind, have been productive of great accessions of knowledge of the vegetable kingdom of Africa; and a visit to the establishment of Messrs. Martin, of Paris, at their temporary depot in New Bond Street, has acquainted us with several specimens of fruit which created astonishment; while the new plants from the Atlas region, as well as some from California, show the singular richness of the vegetable kingdom in those remote and hitherto little-explored mountain regions.

"Louis Martin, born at Venose, in the department of the Isère, was gardener to Prince Torlonia, the eminent banker of Rome; and, desiring to know more of the highland regions to which access had been procured by the activity and valor of his fellow-countrymen in Algeria, proceeded to Africa with other amateurs; and we have here some of the plants sent to Paris, as well as some others from California, and fruits from the South of France, which have created much admiration on the other side of the Channel, and which are here only beginning to be known to the general amateurs of this delightful pursuit.

"Of the fruits in the catalogue we are most struck with the *Belle Inexagore*, from the nursery of M. Audibert, of Tarascon—a pear of extraordinary delicacy of flavor, weighing between two and three pounds; also the *Bergamotte d'Oisan* and *Beurré Martin*, of the same weight. The peach of Oran is of great size, and small soft heart. The plums of Oran are also very fine; but it is admitted that in size and flavor they are beaten by the English plum of our best horticulturists. The cherries of Tlemecen, perfected in France (*Cerise Creole*), have bunches weighing two pounds. The Avocatier, from California, has the taste of fresh butter, the large green fruit attaining the weight of no less than six pounds. The Carambolier is of great beauty (*Averrhoa*), tasting like honey, and the fruit of a bright yellow. To which we may add the Pomme d'Acajou (*Anacardium*), or "heartless Mahogany Apple," the kernel being altogether outside, tasting like a delicate almond, and the fruit itself luscious. Perhaps none is more remarkable than the Strawberry of Morocco, from the spurs of the Atlas, a *tree* with a trunk, which produces a monster specimen of the usual strawberry, two pounds weight and five inches in diameter. It resembles the Ananas Muricata of California, but has a much more delicate taste. [Where is Peabody's Seedling?]

"From the same vast region of unexplored forests, defended by the feline beast of prey and the formidable serpent, we have the finest specimen of the gentian family we have seen. The Calypso Africana, of the most beautiful pyramidal construction, the cups of the most exquisite velvet-like tissue, and of a deep palpitating cerulean blue color. We have also from the Atlas the *Lilium Lancifolium Aurantheum*, a lily that looks exactly like the skin of one of those panthers that guard this mainland Garden of the Hesperides. We have far from exhausted the catalogue of these novelties; but enough has been said to indicate the value of the plants which can be procured at this establishment."

Wigelia Amabilis.—A correspondent at Baltimore writes as follows: "I notice the Horticultural Journals lay great stress on the Wigelia Amabilis blooming late. My plant, now standing out two years, and in a sunny aspect, has both seasons bloomed twice—in May, and again in September—one as profuse as the other. I also find great difference between the blooms of it and W. rosea; the latter is in bunches of four or six upright flowers, while the Amabilis forms pendulous heads of a dozen or more blooms like Deutzia gracilis."

Aponogeton Distachyon.—Some of our friends have of late years paid deserved attention to the introduction of aquatic plants, and, amongst other discoveries, have found the *Nelumbium luteum* to be hardy enough to stand our winters, and growing in abundance near Philadelphia. We cannot have too many hardy water plants, and the one named at the head of this paragraph is a very desirable kind. Its flowers are as fragrant as those of Magnolia glauca, and are produced very abundantly. Though a native of the Cape of Good Hope, it is hardy in England, and feels so well satisfied with France as to become quite naturalized in some of her rivers.

Books.—In answer to D. A. W., we may say that no copy of the work mentioned ever reached our "Table;" it was, however, bought, and noticed on its own merits, and this course we greatly prefer to having any inducement in the way of a bookseller's donation; it leaves us entirely free to notice such books as are of interest to our readers, without bias. The source of profit from books received by editors, is beneath their notice, and results, more frequently than not, in puffing the most worthless trash that it is well possible to print; every editor who lends himself to such measures, does himself and the public a great wrong. We have labored long to convince all concerned of their error, and it is at length better understood that all such notices bring with them their own condemnation. A *library*, so called, is known to us, containing thousands of volumes presented in this way, and we very much doubt if any bookseller in the Union would give more for the lot than the price of waste paper.

Col. Wilder has entered the arena against Mr. W. S. Stoms, of Cincinnati, on the dwarf pear controversy which we so innocently started. The Colonel offers to meet Mr. S. at any Boston station, with a carriage and *pear* of horses, and drive him all about Boston, Salem, and Concord, at the proper time of year, and exhibit to him all the dwarfs on record thereaway. This is an offer not to be neglected, and Mr. Stoms will, we have no doubt, avail himself of it in due season. The same thing was done to a near friend of the *Horticulturist*, last year, to his great delight. A monthly periodical, called the *Cincinnatus* (no doubt, because it never expects to be called from the plough which it drives so ably), contains this new breeze, which we are pleased to find blowing at such a safe distance from Philadelphia.

The flower of the Downing Camellia reached our "Table" by the kindness of Mr. Rauch; it is unquestionably one of the most beautiful and delicate we have ever seen.

Rules for showing a Garden.—"There are two rules for taking a party over a garden," says a modern writer, "which, if violated in any one instance, will do infinite harm in respect to the best effect. The first is, *never*—*never*—to take strangers over your garden *against the sun*. It is worse than throwing dust in their eyes, if there is an 'eye' amongst them; and the second rule is, to be sure not to let strangers see the best parts of the garden first. Take them to *moderado* first, then let each turn reveal a better scene than the last, and let the last itself be the grand climax. As long as they live, if they are worthy to live on gardening, they will never forget the good impression."

Mr. E. Sanders, of Albany, and his brother, are about to commence business in Chicago. Choice flowers, shrubs, and trees, will, we have no doubt, be found wherever they may set up their tent.

Soap by the Saponifier.—Every housekeeper is talking about "the Saponifier," and, as we like to chronicle what is passing about us, we may as well state that the grocers have for sale the "Keystone State Saponifier," in pound canisters, each canister sufficiently strong in caustic soda to make half a barrel of excellent soft soap in a few minutes, and hard soap *ad libitum*. It is made at Tarentum, Alleghany County, Pa., by the Pennsylvania Salt Company, probably by the following process: Oil of vitriol decomposes the salt, and forms a sulphate of soda, which is decomposed by caustic baryta or strontia, and thus makes a nearly pure caustic soda. It is in general use, and the demand at nineteen cents a canister is equal to the power of making it, so that it is not advertised. Housekeepers are now enabled to use up their own soap-fat economically.

Leaves for Leaf-mould.—Nothing can answer better than Elm and Sycamore. Beech is more valuable for giving heat, and keeps longer, and, therefore, it requires more time to rot into mould. Oak-leaves are the most lasting; but they require two years, at least, to make good leaf-mould, just because they are so lasting for hotbeds, and also because containing so much gallic acid. We find nothing comes amiss for this purpose except the Fir or Pine tribe, and even they are useful for some purposes if kept long enough. The softest leaves that you gather, even though you ferment them by throwing them into a heap, and turn that heap frequently, will require the greater part of a twelvemonth to be in nice order for potting, though I have used them, after being well fermented, and then dried in cakes, in less than six months. If you want a stock early, keep your Maple, Sycamore, Ash, and Elm together by themselves. As stated, Oak are the most lasting for beds and giving bottom-heat.

P. W.

Silver Springs, Florida, February 11, 1857.

J. Jay Smith, Esq.—Dear Sir: Florida ought to be visited in winter, by our Northern friends. It is indeed a most delightful climate. Every day, here, has been a glorious, sunny day. We have been all the time visiting springs, plantations and sugar manufactories, besides a good deal of shooting and boating. We visited first the Orange Springs, a most beautiful location, with all the features of a tropical landscape. Palmettos of all kind are there in profusion; the groves are covered with Magnoliæ glaucæ of large size and beautiful appearance—some measuring from 10 to 14 feet in circumference, straight and tall as arrows; oranges, red and white bay, myrtles, live oaks, Laurus Carolinensis, &c. To-day we saw a Cupressus disticha, which my wife wanted to have measured; it was 23½ feet in circumference! The hammocks are densely filled with such vegetable giants. Vines and creepers of all sorts run from tree to tree. They are almost all now swelling their buds; some have their foliage almost developed; the yellow jasmine is in blossom, and the elder and wild plum are in their spring dress. I saw two families of the Erica, which I did not find in any other place. The aspect of their hammocks, as they call those evergreen forests, is truly magnificent. Sometimes a road runs in the middle of one of these groves, and the scenery is then almost tropical.

Orange Springs has a peculiar appearance, by the profusion of its palm trees. The spring is clear, and abundant with a fine, large basin, but it is very sulphurous. Silver Springs, which I should rather call Emerald, are more to my taste. The springs form a large basin of about five acres, which, in some parts, has a depth of about 40 to 50 feet. The bottom is varied with aquatic plants and mosses, and pure marl or shell limestone. The plants are

of that bright bluish green which you see in the large bottles in your drug stores by gas-light. The limestone is still more brilliant; it is a rich display of prismatic colors, dazzling the eye, but the predominant color is always that bright, lovely emerald. I had a fine bath in that noble basin. The temperature of the water seemed to me to be about 60°. Some very large trout are found in it. If there was a good road, and more convenient accommodation, I have no doubt it would soon be a place of resort, in winter, for such as, like myself, deem your northern winters rather too trying.

Of fruit and fruit trees I have seen but little in Florida. Orange groves are numerous enough, but they are most of the bitter, wild fruit. In southern Georgia a small insect is playing great havoc among the plantations, but here it seems to be unknown, at least no body could tell one anything about it. Peaches would be in great abundance if the inhabitants would go to the trouble of planting them. Fig-trees are more cultivated, but you can ride over scores of miles without such a *useless* thing as a fruit tree. Cotton is all in all. Strange to say, in a climate where good fruit would be such an effectual preventive of bilious diseases, no fruit, and *few*, very few vegetables, are found.

The soil of Florida is almost uniformly sandy, very sandy, with substrata of marl and phosphatic limestone, in the hammocks. Vegetation is most luxuriant where this substance prevails. It is almost the only building stone found over the country. I am going back to Ocala, and from there to some plantations, till your snow is gone. Ocala is a most beautiful little town, as far as location and scenery are concerned. The walks all round are splendid, in the midst of the magnolias and palmettos; with the exception of those hammocks, all the rest is one vast forest of broad-leaved pine; some lakes and very few streams and plantations—few and far between. But the mildness of the climate is such that we sleep with open windows. The thermometer for a week past has been up to from 60° to 80° at noon, with a pure sky and calm, balmy weather. It has frozen this winter in Florida. Oleanders are nearly killed, but I see no harm done to evergreens.

Gossip.—A horsechestnut tree in full flower has been not inaptly called a giant's nosegay, and by another a gigantic hyacinth. The manner in which it scatters its flowers on the grass, and the comparative uselessness of its timber and fruit, make it an excellent emblem of ostentation. Its wood is recommended for water-pipes that are to be kept constantly under ground. In Turkey, the nuts are ground and mixed with horse food, especially when the horses are broken winded; in the natural state, goats, sheep, and deer are fond of them. The flour is said to strengthen bookbinders' paste.——Various tests as to what constitutes *civilization*, have been thought of. By one historian it is said nations that coin money may be considered civilized; another that hospitals for the insane, which were found in Mexico at the conquest, give that character to a nation. A new one is proposed—that we call that State of the Union the most civilized which has the most pleasure carriages and pianos; Ohio will rank high, she has taxed 2,731 pianos the last year. Gentility was defined "keeping a gig;" in Ohio there was no fewer than 261,849 pleasure carriages and wagons, valued at $5,530,863! Is it any wonder, O! *Ohio Farmer*, from whom we derived the above, that butter is scarce?——Diocletian gave the first example to the world of a resignation of supreme power and a throne. The amusements of letters and of devotion, which afford so many resources in solitude, were incapable of fixing his attention; but he had preserved, or at least soon recovered a taste for the most innocent as well as natural pleasures, and his leisure hours were employed in building, planting, and gardening. He rejected a solicitation to resume the imperial purple, with a smile of pity, calmly observing, if he could show Maximian the cabbages he had planted with his own hands, he should no longer be urged to relinquish the enjoyment of happiness for the pursuit of power.——The melancholy exhibited by some of our exchanges in their appeals to their subscribers, is often very

ludicrous. This demand for money may be readily cured by adopting the cash system, by which means the papers not wanted would end their long agony in a much shorter time than heretofore. If a paper will not command payment in advance, it had better be given up. These remarks are suggested by the following leader from the *Green Mountain* (Maine) *Farmer*, which it is as well to put on record: "As we said before, we absolutely need money. We have between three and four hundred dollars due us, from those owing six months to a year. Now, friends, don't be bashful, but just send along the small amount due, and then you will have the enviable satisfaction of reflecting, when you sit in your snug, warm parlor, of a cold, chilly night, quietly perusing your paper, that he who labored to fill its columns for you, is not at the same time shivering over a cheerless fire, whose feeble blaze affords him the only light by which to glean news from his exchanges for the next paper; and also that his better half is not engaged in stuffing those old pantaloons more snugly into the clattering windows to break off the searching wind, or endeavoring to quiet the little ones who have been put to bed minus their cup of milk. We say you will have the satisfaction of reflecting that this is not so. Won't this pay you for your trouble?" It makes one quite sad to think of this application of the "old pantaloons," in lieu of "rural art."——A law case of interest has lately been decided in England, in which a market gardener sought redress from a gas company for damages caused by the gases and soot evolved from the buildings. The plaintiff complained, and he and his witness proved that his fruit trees were destroyed or rendered unproductive, his hedges blackened and decayed; the branches of his trees were covered with soot, his annual crops were injured, and his trade seriously affected by the impossibility of bringing what few vegetables he could raise early into a state fit for sale. His scientific witnesses, one of whom was Prof. Way, proved that the leaves of his vegetables were covered with white spots, and those of his trees were shrivelled up; that the branches were so loaded with soot that it could scarcely be cleaned off, that their breathing pores were choked up, and their very tissue disorganized. Verdict for plaintiff.——Swans may become attached to mock representations of their mates. One of a pair of swans frequenting a pond died recently. The owner not being able to get another swan, had a wooden one made, painted white and moored in the pond. The survivor took it at once as a companion, and never left its neighborhood. A visitor doubted the fact of the live one frequenting that part of the pond on this account, and the wooden swan was removed to the other side of the pond to try, when it was at once followed by the live one. By this contrivance the swan was always kept in the part of the pond which was visible from the windows.——The Himalayan Rhododendrons have found no *fancier* in America yet, but it may be hoped some one at the South will take the pains to introduce them, and we do not despair of some of these beautiful productions being hardy even here. They should be planted against perpendicular masses of rock facing the north, and most of them in damp and dark situations, screened from every wind; such being the conditions in which Dr. Hooker (in his Himalayan Journals) describes these plants as most luxuriant in their native habitats. Such an arrangement has the further advantage of retarding their growth in the spring, for all are of an excitable nature, and therefore liable to be injured by late frosts.——Biddulph Grange, the English seat of James Bateman, would appear to be the best worth visiting of any improved place at this moment. A recent description in addition to much of interest, says: "By the margins of the rocky streamlet through the glen, a nice collection of half-aquatic and marsh plants is arranged, and some moist spots are specially provided for the many pleasing bog plants of Ireland and Wales. Here are various kinds of Reeds, Sedges, the Chinese Grass (Acorus japonicus), the Pampas Grass, the New Zealand Flax, Bambesa Metake—a hardy and pretty Bamboo, the double-flowered Sagittaria, the Water Dock, the charming little bog-loving Pinguiculas, and a great number of other interesting plants, including some of the bolder forms of Fern, for which the shade and

moisture are particularly suitable. Here, as elsewhere throughout the place, the greatest possible peculiarity of condition is introduced, not merely for the sake of additional variety, but to furnish a congenial abode for that wondrous multitude of curious or ornamental plants to which such circumstances are naturally incidental."——Desiccated or dried milk seems likely to become an article of commerce. The powder is placed in bottles, and will keep in all climates and for any length of time. During the Crimean war, in the hospitals, &c., it was very useful. The French who make artificial diamonds so admirable, also counterfeit milk, which is made by putting a certain weight of bones with a little meat, with six times the weight of water, in Papin's digester. Being sealed hermetically, and raising the heat to 140° F., in forty minutes, from a stopcock, a white liquid comes out. It is nutritious, being a kind of broth, but has really none of the chemical properties of milk. ——The poverty of iron among the Sarmatians, prompted their industry to invent a sort of cuirass, which was capable of resisting a sword or javelin, though it was formed only of horses' hoofs, cut into thin and polished slices, carefully laid over each other in the manner of scales or feathers, and strongly sewed upon an under garment of coarse linen.——In a very interesting report regarding the January storm, by Lieut. Bennet to Lieut. Maury, he makes the following startling statement: "Are you aware that at this season of the year the average number of shipwrecks is about one American vessel for every eight hours, and that the total value of the losses at sea for the month of January is set down at something like four millions of dollars?"——A toad or a frog placed in a cucumber frame will effectually relieve it from wood lice. He soon dispatches the whole brood.——Nasturtiums of different colors make a very showy bed; simply by driving down posts and nailing laths on them, these beautiful flowers will cover a large surface, and be perpetually gay.——A drying chamber is highly recommended abroad, for drying French beans, carrots, cabbages, onions and celery, by a current of air heated to 100°, by which, it is asserted, all the good qualities of those vegetables are perfectly preserved, and retain their peculiar flavors. Sweet herbs, too, are saved immediately by this process. Bark for tanning, thus cured, is said to retain its valuable qualities better than that dried in the open air. They begin, indeed, in England, to talk much of drying the grain crops in this way.——Bouchere's mode of preserving wood is much spoken of in the French journals. Soon after the tree is felled, a saw cut is made in the centre, the tree is slightly raised under this, which partially opens the cut which is tied up, the support withdrawn and the cut is entirely closed. An auger hole is then bored obliquely into the saw cut, and a wooden tube inserted to which a flexible tube is attached, placed in connection with an elevated reservoir; the sap exudes, and its place is taken by the solution of sulphate of copper. The results mentioned are really wonderful, and the least esteemed woods, and therefore the cheapest, are precisely those which afford the best results.——A little rosin powdered and dusted over peas, &c., when sown, effectually protects them from the depredations of birds, mice, and other vermin.——At Kew Gardens, in a glass case is a plant of Opuntia coccinellifera covered with the cochineal insect. This has been an inhabitant of these gardens for these last forty years and more; it has, however, sometimes been nearly lost from those unacquainted with it clearing it off the plants, thinking it a pest which had no business there.

Flora's Dictionary, by Mrs. E. W. Wirt, widow of the late distinguished William Wirt. This is an illustrated manual of the poetry of horticulture, and will greatly gratify those who would

> "Gather a wreath from the garden bowers,
> To tell the wish of their hearts in flowers."

It is intended as a presentation book. See advertisement. The venerable authoress deceased, a few weeks since, at Baltimore, at the advanced age of seventy-three.

ANSWERS TO CORRESPONDENTS. HARDY CLEMATIS.—There are near forty species of hardy clematis in European collections, but it is uncertain whether they are so here. The following list may be relied on: C. Virginiana, Sieboldii (two varieties, azurea and bicolor), campanulata, cœrulea, flamula, florida, florida pleno, Hendersonii, vitalba, Viticella, V. cœrulea, V. rubra, V. violacea, V. purpurea, glauca, montana, crispa, smilacœfolia, and viorna.

GRAFTING LEMON-TREES.—(A SUBSCRIBER, York.) In some countries, grafting is the general mode, but, with us, budding is most usual. The stocks are seedlings from the lemons of the stores. They are budded when two or three years old—generally in July or August—but at any time when the growth of the stock of scions are half through. It can best be accomplished in a close, moist heat—say in a greenhouse or frame.

When peach-trees are "frozen," the wood as well as the pith turns of a brown color.

PEARS ON THORNS.—(A SUB., Wilkesbarre.) They unite readily by grafting, but are short-lived, and worthless for all practical purposes.

TULIP-TREES.—(W. F. B., Ashfield, Mass.) If your tulip-trees are to be taken from the woods, care must be taken to secure as much as possible of the roots; plant again as soon as you can, and well water at planting. To get them to do well, choose plants five or six feet high, and, after planting, cut to the ground, and select the strongest shoot for the future tree. There will be no time lost by the sacrifice. There is but the one variety.

WINDOW PLANTS.—(The same.) Double glazing is highly advantageous in preserving the temperature of rooms in severe weather, and does not materially obstruct the light; but it is very objectionable, by the condensation of moisture, and growth of green vegetable matter on the inside in such cases.

FORCING FRAMES.—(C.) Nothing is more easily forced than lettuce. Indeed, we doubt whether anything is better fitted for the purpose than the common hotbed frame. For artificial heat, stable manure or leaves are preferable. Very little heat is required; over 55° may be considered injurious, unless the plants are very near the glass, which, in any case, they ought to be. If it were desirable to grow them very extensively, no better plan could be adopted than to have long pits constructed with boards or brick, and the whole heated by hot-water pipes carried around on the inside. This could all be done in connection with the small propagating house inquired about—one boiler heating both. For a propagating house, and, indeed, for any kind of greenhouse structure where heat and light in winter is an object, a lean-to house, with a south or southeast aspect, is preferable to any other. In a house expressly for propagating, it is best to have a pit built, so as to contain a few feet deep of tan or leaves, or even sand, with the view of having a slight bottom heat or material to keep moisture around the pots. Sashes are not essential, if you provide sufficient ventilators in the front and back walls to keep down the temperature when it is likely to rise too high. A house can be built at a considerably less cost, and will cost less to maintain artificial heat, when the roof is built on the house without movable sashes. The entrance should be at one end—at the warmest.

Where coal and lumber are cheap, houses and frames may be constructed of wood more profitably than of any other substance.

DIOSCOREA BATATAS.—(W. GROOM, North Fork, Ill.) This stood the winter of 1855–6 here perfectly. We should say it is "as hardy as a parsnip." They attain a fine size the first year when *roots* are planted.

STUARTIA VIRGINICA.—(W.) We are pleased that your attention has been drawn to this beautiful shrub. It flowers from July to September, when other bloom is scarce. It thrives best in a peat soil rather moist, but will also grow in deep, moist sand. No fast growing roots should be allowed near it, or they will overpower those of the Stuartia. In general,

being a swamp plant, it may have partial shade. It looks best trained up to a single stem, so as to form a small tree. Both this shrub and the Gordonia are allied to the Camellia.

(P. T. W.) Pompone was the name of a French head-dress; hence the pompone chrysanthemum and camellia ("Pomponia") received their names from a fancied resemblance to this head gear.

J. Jay Smith, Esq.—Sir: I notice your remarks with regard to the advertising sheets of the *Horticulturist*. The advertisements have always been of interest to me as an amateur, and are always read first, to see what is new; and from the first, I have had the advertisements *bound in the volume*, put together in the last part of the volume. I would suggest this, as I do not know of its being practised, except by a few to whom I suggested it.

Fletcher Williams, *Norwich, Wayne County, New York.*

Perdita, in the *Winter's Tale*, and the Clown, in *All's Well that Ends Well*, allude to the same name for Rue, the clown making a neat pun upon it. The Rue is by no means a homely shrub, having a profusion of fine dark yellow flowers, constantly renewed. It has been employed for bordering flower beds, and as a garden hedge.

Catalogues, &c., received.—New and Choice Bedding Plants, imported and cultivated by Daniel Barker & Co., Florists, Forest Hill, Utica, N. Y., 1857.

For the Spring of 1857.—Catalogue of Fruit and Ornamental Trees, Shrubs, Vines, Plants, &c., for sale at the Columbus Nursery, one and a half miles south of the State House, on High Street, Columbus, Ohio. By M. B. Bateham & Co. Ellwanger & Barry, Rochester, and M. B. Bateham, Columbus, Proprietors.

Lewis Ellsworth & Co.'s Descriptive Catalogue of Fruit and Ornamental Trees, Shrubs, and Plants, for sale at Du Page County Nurseries, Napierville, Illinois. Much attention seems bestowed here.

Priced List of Plants for sale by W. C. Strong, Brighton, Mass. A large catalogue, and an extensive list.

Report of the Pennsylvania Hospital for the Insane. By Thomas S. Kirkbride, M. D.

Trees as Arches.—We gave last month some cuts of trees so planted and trimmed as to form natural arches. There is abundant room for design in the structure of ordinary timber arches. This used to be done by whalebone. The subjoined cut affords an example of a simple arrangement which may occasionally be introduced with a pleasing effect; the old tree stump beyond combines well with the pointed arch to complete a rustic scene at the crossing of a bridge, &c.

ROCHESTER, N. Y., February 27, 1857.

The Horticultural Society of the Valley of the Genesee, held its annual meeting, in this city, on the 6th inst. The following officers for the ensuing year were unanimously elected: *President*—WM. A. REYNOLDS. *Vice-Presidents*—AUSTIN PINNEY, ZERA BURR, H. C. WHITE, SELAH MATHEWS, GEO. ELLWANGER, H. N. LANGWORTHY. *Recording Secretary*—C. W. SEELYE. *Corresponding Secretary*—H. E. HOOKER. *Treasurer*—JAS. H. WATTS. The meeting was very spirited, and we expect the exhibitions of the Society, during the coming season, to excel any previously made.

News has just reached our ears of the death of our esteemed friend and associate, James H. Watts. He died last evening, February 26, of typhoid fever, after a very short illness.

C. W. SEELYE.

To J. J. SMITH, Esq.

EDITOR OF THE HORTICULTURIST.—DEAR SIR: If you will allow me the requisite space at your "Editor's Table," I should like to inquire whether any of our public-spirited cultivators of greenhouse plants, have yet introduced—or tried to introduce—living specimens of a remarkable tree known as the *Snake-Nut-Tree* of Guiana. Specimens of the nut—so curious for the striking resemblance of the kernel to a snake coiled up—are occasionally to be met with; but I have never seen, nor heard of, a *living plant* in any of the rich collections in or around Philadelphia. Germinating seeds, and young plants, might surely be brought hither in *Ward Cases* without difficulty; and a sight of the growing trees would be a most interesting treat to the botanists and lovers of vegetable rarities. May we not hope that some of our enterprising gardeners or amateur florists will take measures to afford us such a treat at an early horticultural exhibition? The tree is indigenous on the banks of the River *Essequibo*, and its tributaries in *British Guiana*, and specimens might doubtless be readily procured through persons trading to that region. There is a brief but interesting account of it, by R. H. Schomburgk, in the fifth volume of the *Annals of Natural History*. Endlicher, also, in the *First Supplement* to his *Genera Plantarum*, has given its botanical character after Schomburgk, *hellenizing* the English name—*Snake-Nut*—into the generic one of *Ophiocaryon*. Trusting that we may yet have an opportunity to look upon such a curiosity, I am, very respectfully, W. D.

West Chester, Pa., Feb. 7, 1857.

THE DOWNING CAMELLIA.—An inquiry respecting this Camellia has elicited the following from the President of the Brooklyn Horticultural Society:—

NEW YORK, Feb. 19, 1857.

J. JAY SMITH, Esq.—DEAR SIR: In relation to the Downing Camellia, I have been informed by Mr. Rauch that he had communicated to you in relation to its distribution; presuming that he had done so renders it unnecessary to advise you. The circumstances in relation to the Camellia are these: The late N. J. Becar, of several seedlings, considered this his best, and prized it most highly, as one that would be an ornament to our present varieties; and when he had determined to part with the stock, he named it the DOWNING (after his particular and lamented friend); and left it with me to obtain fifty subscribers, at ten dollars each, presuming that he had fifty plants, which would realize five hundred dollars. This sum was to be applied for the purpose of obtaining three portraits of Downing, to be presented to the Philadelphia, Boston, and Brooklyn Horticultural Societies, observing at the time, that he wished to "present these Societies with some appreciation of the good feeling that had been tendered him." His widow being aware of the arrangement that existed between Mr. Becar and myself, authorized me to carry it out in the manner referred to.

Under the advice of Mr. Rauch and others, the plan of distribution has been changed, by classifying the plants at a fixed valuation, and the price fixed is from ten to forty dollars. This is on the basis of the difference in their value. There were four in the forty dollar class, two of which have been taken, one by a member of the New York Horticultural Society, and one of the Brooklyn Society; this leaves two of that class, one of which I should be pleased to see go to Philadelphia, and the other to Boston, and the other classes it would be gratifying to see distributed as equally as possible between the four Societies named. Any aid that you can render would meet with my thanks, and would give an equal opportunity to each Society. Mr. Rauch was to have had an advertisement, giving a full description of the Downing, in your March number, which I am in hopes he has attended to. I will send you three or four of the flowers as soon as I have an opportunity, with any other information in relation to it that I have not noticed on this occasion.

With great respect, your obt. servt.,

J. W. Degraw,

[See Advertisement in March number.—Ed.] 69 Washington Street, New York.

Montreal, Feb. 14, 1857.

J. J. Smith, Esq.—Dear Sir: Some typographical errors have occurred in my letter to Mr. Phœnix, published in the December No. of the *Horticulturist*, which it may perhaps be as well to correct.

P. 554, for "Kerwick" read "Keswick;" "Hawthorne," read "Hawthorndean;" "Dorning," read "Dominie;" "Breden Pippin," read Bredon Pippin." Third line from bottom, for "Carrol's Seedling," read "Pearson's Plate." P. 555, for "Banquet," read "Bang-up."

I am afraid we shall hear bad accounts of the severity of the present winter. The thermometer has here registered 37° below zero, and we have had a long spell of exceedingly cold weather. The other day I noticed that the young shoots of a plum-tree were winter-killed. It stands close to a vinery border, and had perhaps made too luxuriant a growth.

It may interest grape-growers to state, that the different varieties of the Chasselas prove quite hardy in this cold region. Mr. Turner has fruited two sorts on the grounds of the Hon. James Leslie, in Montreal; one of them the Royal Chasselas. Mr. T. pronounces them, in open air, not superior to the old White Sweet Water. Some years since, I fruited the Chasselas de Fontainbleau in the open ground. All these hardy grapes, with us, require to be covered up in winter. Yours respectfully,

Wm. Brown,

(late Cockburn & Brown.)

Hartford, Conn.

Dear Sir: My experience in the cultivation of apples warrants me in bearing testimony to the truth of the assertion of your correspondent in Kingston, N. Y. (H. H. Reynolds), that the Jonathan Apple "deserves a more extended reputation and cultivation." It is, certainly (as you remark in a note), "a desirable kind for cultivation."

I had been surprised to find that it is so little known in this vicinity, where so many kinds of good apples are raised in great perfection. With me it is a free grower, very productive, bears while quite young, and fruits every year. The tree grows in handsome shape, and the beautiful red fruit is distributed very uniformly over the branches. For about a month in the fall—say from the middle of September to the middle of October—there is not a more attractive feature of the kind on my grounds than the Jonathan Apple-tree; in fact, it is perfectly *ornamental*. I esteem it as one of the very best of thirty choice varieties which I am cultivating; and if I should ever be so situated that I could have but four or five kinds of apples, the Jonathan should be one of them; and (by the way), the Red Astrachan another. Respectfully, yours, &c.

Daniel S. Dewey.

Horticultural Societies.

Pennsylvania Horticultural Society.—The stated meeting of this Society was held at Concert Hall, on Tuesday evening, 17th of February. Various premiums were awarded.

Among these we notice, for the best Apples—twelve specimens—the Mammoth Pippin, and for the second best, the Chester's Spitzenburgh, to John Perkins. *Special Premiums*—five dollars for three Queen Pine-Apples in pots, and one dollar, for Isabella Grapes, to Mark Hill, and one dollar to S. W. Noble, for Apples.

The appointments of the Standing Committees for the year were announced.

Brooklyn Horticultural Society.—*President*—J. W. Degrauw. *Vice-Presidents*—Henry A. Kent, Wm. C. Langley, W. S. Dunham, J. S. T. Stranahan, S. J. Eastman. *Treasurer*—M. Brandegee. *Corresponding Secretary*—J. E. Rauch. *Recording Secretary*—James Park. The spring exhibition, 1857, will be held at the Brooklyn Athenæum, in Atlantic Street, corner of Clinton Street, opening to the public on Wednesday, the 15th of April, at 4 P. M., and continuing open during the 16th and 17th, from 8 A. M. to 10 P. M. The premiums are numerous and liberal.

Calendar of Operations.

APRIL.

THE VINEYARD.

BY R. BUCHANAN, CINCINNATI, OHIO.

This is a busy month for the vine dresser. If not done last month, the stakes have now to be driven firmly into the ground, and the vines tied to them. When the buds begin to swell, bind the vine round in the form of a bow, and fasten it to the stake with willow ties; one at the top of the bow, and another at the end of the vine, will do. This lower tie may bring the vine close to the stake, or leave it three or four inches off, if there is danger of breaking it. This should be done, in damp or cloudy weather, in the forenoon, when the vines are pliable; by giving the vine a slight twist, it will be less liable to break. Tying requires judgment and care.

Plant cuttings, in nurseries, in trenched ground, in rows two feet apart, and the cuttings three or four inches apart in the rows, five or six inches deep at the butt or lower end, and the top bud just even with the surface of the ground.

When the ground is warm and mellow, plant out vines or cuttings in the new vineyard. If the latter, plant two to a stick, and if both grow, take up one to replace failures. Three by six, four by six, four by seven, or four by eight, is a good distance, if trained to stakes; if on trellises, six by eight feet apart will do. Lay out the rows carefully with a line, and put down a stick, about fifteen inches long, where each vine is to stand. Plant the cuttings ten inches deep, and six inches apart at the lower end, and the buds at the top end, even with the surface, and one inch apart. They will be then placed in a slanting position.

Leave alleys or walks, every ten to twenty rows, ten feet wide, and cross them when necessary.

Some persons cultivate their vineyards the latter part of this month, with the plough or hoe. Others prefer May. And it has lately been suggested to omit spring culture, and keep the weeds down with a scythe or a scuffle hoe; then to hoe or plough about the time the grapes begin to color, late in August; and to cultivate the ground thoroughly in October, after the crop is gathered. It is thought this method may prevent the "rot."

Plant the yellow willow in wet places, to make ties for the grape-vines. Cuttings one to four inches in diameter will grow readily.

BY WILLIAM SAUNDERS.

Vegetable Garden.—The practice of pinching out the points of growing plants, induces early maturity and increased productiveness. By cutting the tops off peas immediately after the first flowers open, the crop is hastened, and the individual plants send out lateral

shoots, and the bearing season is lengthened. So also with tomatoes; topping each shoot just above the flower bunches, will make a difference of some days in the fruit ripening.

Spinach, lettuce and cauliflower, may have a cool and shaded aspect, to prolong their growth. In the sun they are apt to grow rapidly to seed.

To keep up a regular supply of vegetables throughout the season, care must be exercised in putting down successional crops. Make two or three sowings, at intervals of a few weeks, of such seeds as peas, beans, beet, carrot, cabbage, radishes, &c. For condiments, cookery, and other purposes, we append the following list, which may be had from the seed stores, and which may now be sown: Basil, anise, cardoons, dill, fennel, caraway, celeriac, finochio, marygold, marjoram, nasturtium, tansy, skirret, scurvy grass, savory, cress, chervil and mustard.

Hardy Fruit.—Fork up slightly between the rows of strawberries, if the soil is very compact. Never use a spade unless to dig up the bed; no plant repays extra care more certainly than the strawberry, and perhaps there is none less satisfactory under poor treatment. Deep, rich soil, and mulching during dry weather, will be attended with success.

Pears.—Attend early to pinching out the points from rampant growing shoots. No operation on trees is practically of more importance than this; it effects a saving of time, economizes manure, and increases the crop; indirectly, it is true, but none the less in fact. There cannot be a more pleasing occupation, for the amateur in fruits, than attending to a collection of dwarf pear-trees. Having in his eye the symmetrical proportions of a pyramidal-formed tree clothed with foliage from the ground upwards, he will now be bending down strong shoots and elevating weak ones, to equalize their conditions; and, as growth advances, those shoots likely to take a lead, and disarrange the equality of growth, will have their tops pinched out.

Grapery.—The canes will grow with more regularity, if their points are retained in a pendent position; as the shoots grow out, tie them up. Admit air every favorable day; of course, cold, rustling winds must be excluded, but endeavor to inure them to free ventilation, and let the house be opened a little during the night, as soon as all danger from frost is past. It is a mistake to suppose that a constant high temperature will hasten the maturity of the crop. Even the lowering of 10 degrees during night is not sufficient. A difference at least of 20 degrees is absolutely necessary. To illustrate my meaning, I will briefly state the management and progress of two graperies as observed by me last summer, which I will designate as No. 1 and 2. No. 1 is furnished with a furnace for artificial heat; slight fires were made early in March, to start the vines. The temperature was carefully kept up, and the house shut up closely at nights, until the grapes commenced to color. No. 2 had no heater of any description; the vines budded out in April, with the warmth of spring; the second week in May the top ventilators were lowered, so that an opening of four feet was gained continually the whole length of the house, and was kept in that position, without alteration day or night, until November. Now for the result. The fruit in No. 2 was ripe and colored to the greatest perfection, and was cut before No. 1—the grapes in the latter were red, while they should have been black. The vines in No. 2 ripened well; the leaves changed color, dropped off, and the canes winter-pruned, when those in No. 1 (I saw both houses the same day) were green and succulent, not a leaf indicating a tendency towards maturity.

Lawns, especially those recently sown, will be much benefited by a top dressing of soil, raked in and rolled, to counteract the lifting out of the grasses by frost. Drain and trench the ground for intended lawns; put your faith in that, and not in any mere mixture of seeds for a permanent turf.

Transplanting Evergreens can be proceeded with towards the end of the month. The cold winds of March, and the early portion of this month, are more injurious to evergreens than any other season. Therefore, it is not well to be in too great a hurry. Deciduous trees suffer less, as they do not present so great a surface for evaporation.

BICTON PINE.

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